

## PHILADELPHIA

## ST. LOUIS BALTIMORE

OFFICE OF H. R. HORTON

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## To our Friends and Patrons:

It is well known that the Great War was a great disturber of prices, for all commodities. This condition, which arose during the war, did not abate, after the signing of peace. It is still with us, and in our case prevents the publishing of this catalog with prices. To overcome this, we shall issue, from time to time, revised price lists, applicable to this catalog and to be used in conjunction therewith.

This catalog supersedes all previous editions. The prices in the corresponding price list are net cash, F. O. B. Philadelphia, St. Louis, or Baltimore. When ordering, please use, wherever possible, the catalog numbers and all other information necessary. This will obviate possibility of error when executing orders, and frequently will eliminate delay.

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The ownership of, or title to, all goods passes to the buyer the moment the shipment is out of the hands of the sender or seller, and in those of the transportation company. The goods should be paid for, by the consignee in the ordinary manner, as responsibility for nondelivery or breakage does not then rest with us. We will, at all times, be very glad to assist our customers with their claims, by furnishing necessary documents and doing whatever we can in our power.

## 

The express and transportation companies are responsible for only a nominal amount, in case of loss or damage. All shipments exceeding in value this amount, should be fully insured. All parcel post shipments are insured by us at standard rates, and the charges therefor are added to our invoices.

Our well-stocked branches in Philadelphia, St. Louis and Baltimore embody retail and wholesale departments and are in position to give customers, in the respective territories, prompt and careful attention to all orders and inquiries.

Special quotations for quantities shall be cheerfully made on request, to dealers, schools and colleges, and industries.

We maintain an export department, which, at all times, will give prompt and careful attention to orders and inquiries from foreign countries.

It shall always be our endeavor to give our friends and patrons the best in service, and it is with a feeling of pride that we can state, that our products are universally regarded today, as of the very highest and best possible quality.

We take this occasion to thank our many friends for their continued good will and patronage, which has enabled us to constantly grow and expand and weather the many storms in our sixty-nine years of existence.

> F. WEBER CO.

Philadelphia, January, 1923.

# THE CHEMICAL AND PHYSICAL PROPERTIES 

# ARTIST COLORS 

Used in the manufacture of WEBER Artist Oil, Water, Pastel and Tempera Colors.

5 5HE question most often asked of the Artist Colorman is perhaps, "Why have the paintings of the Old Masters retained their brilliancy, remaining in such perfect state of preservation, when the modern Artist sometimes experiences even within his own life-time, rapid deterioration and lack of even reasonable permanency in certain of his colors or works?"

It is a question which brings various important facts into consideration, principal of which is the selection of colors from an exceedingly small number of available mostly self-prepared pigments, that were only accepted by the Old Masters after exhaustive conscientious observation and study; this likewise being equally true of their vehicles and mediums, varnishes and painting-grounds.

Not until the eighteenth century do we find the introduction of many new pigments. From then on great numbers of inorganic chemical and artificial organic colors have been developed, the majority of which unfortunately lack the required stability and permanency of true artists' pigments.

The modern Artist makes his selection from pigments numbering far into the hundreds and if not familiar with the physical and chemical character of these colors often destroys his work while still in the making. This is, also, likewise none too true in respect to his mediums, vehicles, oils and varnishes.

Regrettably, it has become the tendency in recent years, sometimes, to brand products with alluring and misleading fanciful names which are meaningless and often lead the Artist unknowingly into difficulties. It is essential that the Artist know his products intimately and have that confidence in the manufacturer which will assure the desired permanency of his work.

The theory that there can be a secret in the methods of preparation of the old masters' hand-ground colors, can hardly be given credence today. The grinding of fine Artists' colors has been developed only along sane, scientific lines. It is true, that each individual pigment and product requires individual study and observation in its preparation, which, today, with the aid of modern industrial chemistry can be made more thoroughly than at any other time.

The granite mills which grind WEBER Artist Colors, have been specially designed and constructed to carry out the identical motion of hand-grinding and can maintain their action in the most uniform fashion over a longer period than is otherwise possible. Many Artists grinding their own colors by hand are wont to add Varnish or other mediums to their oils, thereby obtaining with much less grinding a product of smooth and buttery consistency. However, this addition of Varnish, etc., can be of great detriment, very readily causing cracking and darkening, if not carried out scientifically and with proper knowledge of the materials employed. The Artist can better make this addition to his colors, when desired, while painting, employing Megilp for this purpose. The excess addition of this medium, however, is not recommended for dependable durability.

WEBER Artist Colors have been scientifically developed, extending over a period of more than half a century, during which time it has been possible to make very close study of each individual product of our manufacture. We are, therefore, fortunate in being in that position to make statements regarding our materials which long technical experience leads us to believe are in no respect other than represented.

## WEBER ARTISTS PIGMENTS

THE following list of the chemical and physical properties, pertains to the principal WEBER Artist Colors only, but could also, however, be accepted as recognized statements in respect to any other colors of highest quality.
*Alizarin Lakes Lake Colors derived, in modern times, from artificial
*Alizarin Carmine
*Alizarin Crimson
**Alizarin Green
*Alizarin Orange
*Alizarin Scarlet
${ }^{*}$ *Alizarin Yellow
**American Vermilion
**Antwerp Blue
***Asphaltum
*Aureolin
*Aurora Yellow
*Azure Blue A mixed pigment consisting principally of Ultramarine and WEBER Artist Permalba used as a water color. Permanent to light and air, and fairly opaque.

## PIGMENTS MARKED:

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## WEBER ARTISTS PIGMENTS

***Bistre
***Bitumen
*Blue Black
**Bone Brown
*Brilliant Yellow An opaque pigment produced by admixture of Cadmium Yel-
low, Vermilion and WEBER Artist Permalba, permanent to light and air.
**Brown Madder See Alizarin Lakes.
*Brown Ochre
***Brown Pink
***Burnt Carmine
*Burnt Roman Ochre
*Burnt Sienna

## *Burnt Terre Verte

*Burnt Umber
A water color pigment made from the tarry soot from resinous wood, of deep brown color decomposing on exposure to light.

See Asphaltum.
A carbon black, obtained from the charcoal of selected vine twigs. Absolutely permanent in all painting techniques.

Made by incompletely charring bone meal, of deep rich brown color, fading on exposure to light.

A natural earth, permanent to light and safe in all painting techniques.

A fugitive yellow lake prepared from Quercitron bark of deeper color than Italian Pink and Dutch Pink which are, also, yellow lakes prepared from this source, since very ancient times. The modern, more permanent and richer yellow lakes, derived from coal tar, are best used as substitutes.

A fugitive lake prepared by partly calcining Cochineal Carmine, is best avoided, its hue being readily imitated with the more permanent Alizarin Lakes,

A selected calcined native earth, perfectly permanent in all painting techniques and safe in admixture with all other dependable pigments.

Calcined Italian Raw Sienna. A semi-transparent, perfectly permanent pigment, adaptable to all painting techniques and safe in admixture with all other dependable pigments, WEBER Artist Burnt Sionna ranking high in exceptional rich color value.

Calcined Terre Verte. Thoroughly dependable and permanent in all techniques, semi-transparent of ochre-brown hue.

Calcined Italian Raw Umber. Of rich warm hue, perfectly safe in all painting techniques, permanent to air and light and in admixture with other reliable pigments.

## WEBER ARTISTS PIGMENTS

*Cadmium Yel. lows and Cadmium Red

All hues, from pale Iemon to rich orange culors, having the Sulphide of Cadmium as their base. The light, medium and deep varieties are especially permanent and safe if pore (comitatning io free sutphur), Mixtures with pigments containing copper are best avoided; for exarnple, Emerald Green with Cadmium Yellows is rapidly destroyed. If prore, mixtures with the lead whites are periectly dopendable. The brilliancy and clear color value of pure Cadmiom Yellows have been bighly developed in WEBER Arlist Codmium Yellows.
*Caledonian A natural earth pigment, species of Umber. Imitated by mixBrown
*Cappah Brown A natural Umber of rich hue Imitated by mistures of Burnt Siema and Bunt Umber and as suels is perfectly safo and permanent in all painting techniques.
${ }^{* *}$ Capucine Madder See Alizarin Lakes.
*** Carmine A very fusitive lake prepared from the cochineal insect, of exceptional rich hese and transparency, not only bleaching rapidly under exposure to direct sunlight, bat also readily dentroyed in mixtiore with many of the metallic pigments (Chrome Yellows, White Lead, Raw Earihs, etc.). The modern permanent Alizario Carmine should unquestiomably replace the very unreliable genuine Carmine.
${ }^{* * *}$ Carmine No. 2 A weaker variety of Carmine.
*Carmine Lake See Alizarin Lakes.
**Cassel Earth Synonymous with Vandyke Brown (which see).
*Cerulean Blue A compound of the Oxides of Colalt and Tib. A very permanent, almost opaque pigment of only limited tinting streneth adaptable to all painting techniquen and safe in admixtures with other piemens.
*Charcoal Grey A carkon black obtained by charring soft woods, of tess tinting stregth than Lamp Black, permanent to air and light, safe in mixtures with all other pigments and adaptable to all techniques.

[^1]
## WEBER ARTISTS PIGMENTS

*Chinese See Vermilions.<br>Vermilion<br>*Chinese White Zinc Oxide. WEBER Artist Climese White is an especially selected opaque variety, used in water color to yield an ideal permanent color of great tinting strength.<br>**Chrome Greens Mixtures of Chrome Yellows and Prussian Blue in varying amounts to yield hues from the palest yellow-green to the deepest blue-green color. Owing to content of lead (in Chrome Yellows), in presence of sulphurous gases or compounds, discoloration takes place. Not safe in mixtures with organic colors. Are best avoided where permanency is of first consideration.

> **Chrome Yellows All hues from a pale lemon to deep orange have as their base, Lead Chromate. The paler tints, citron and lemon, are mixtures of lead chromate and lead sulphate; the orange hues are basic lead chromate. The middle hucs are neutral lead chromate. Owing to their lead content, Chrome Yellows rapidly become discolored in presence of sulphurous gases or compounds and when mixed with colors of organic origin (Lake Colors, Indigo, Gamboge, etc.) show a marked tendency to undergo reduction. WEBER Artist Chrome Yellows are chemically pure, having been developed to rank very high in stability and permanency (especially in the oil colors). Mixtures with pigments containing sulphur or its compounds are best avoided. When permanency is of first importance, use should not be made of Chrome Yellows.

*Cobalt Blue Oxide of Cobalt and Aluminum. WEBER Artist Cobalt Bluc is used with safety in all painting techniques, perfectly permanent to light and air, transparent and dependable in mixtures with other reliable pigments.
*Cobalt Greens Compounds of Oxide of Cobalt and Zinc Oxide perfectly permanent in all painting techniques, semi-transparent, safe in mixtures with other dependable pigments. WEBER Artist Cobalt Greens possess the property of retaining their true color hue under artificial light.
*Cobalt Violets WEBER Artist Cobalt Violets are permanent, transparent pigments derived from Cobalt, of little tinting strength, adaptable to all painting techniques and safe in admixtures with other pigments.
*Cobalt Yellow Sce Aureolin.

## WEBER ARTISTS PIGMENTS

*Cadmium Yellows and Cadmium Red
*Caledonian Brown
*Cappah Brown A natural Umber of rich hue. Imitated by mixtures of Burnt Sienna and Burnt Umber and as such is perfectly safe and permanent in all painting techniques.
**Capucine Madder See Alizarin Lakes.
*** Carmine A very fugitive lake prepared from the cochineal insect, of exceptional rich hue and transparency, not only bleaching rapidly under exposure to direct sunlight, but also readily destroyed in mixture with many of the metallic pigments (Chrome Yellows, White Lead, Raw Earths, etc.). The modern permanent Alizarin Carmine should unquestionably replace the very unreliable genuine Carmine.
***Carmine No. 2 A weaker variety of Carmine.
*Carmine Lake See Alizarin Lakes.
**Cassel Earth Synonymous with Vandyke Brown (which see).
*Cerulean Blue A compound of the Oxides of Cobalt and Tin. A very permanent, almost opaque pigment of only limited tinting strength adaptable to all painting techniques and safe in admixtures with other pigments.
*Charcoal Grey A carbon black obtained by charring soft woods. Of less tinting strength than Lamp Black, permanent to air and light, safe in mixtures with all other pigments and adaptable to all techniques.

[^2]
## WEBER ARTISTS PIGMENTS

*Chinese<br>Vermilion<br>*Chinese White

${ }^{* *}$ Chrome Greens Mixtures of Chrome Yellows and Prussian Blue in varying amounts to yield hues from the palest yellow-green to the deepest blue-green color. Owing to content of lead (in Chrome Yellows), in presence of sulphurous gases or compounds, discoloration takes place. Not safe in mixtures with organic colors. Are best avoided where permanency is of first consideration.
** Chrome Yellows All hues from a pale lemon to deep orange have as their base, Lead Chromate. The paler tints, citron and lemon, are mixtures of lead chromate and lead sulphate; the orange hues are basic lead chromate. The middle hues are neutral lead chromate. Owing to their lead content, Chrome Yellows rapidly become discolored in presence of sulphurous gases or compounds and when mixed with colors of organic origin (Lake Colors, Indigo, Gamboge, etc.) show a marked tendency to undergo reduction. WEBER Artist Chrome Yellows are chemically pure, having been developed to rank very high in stability and permanency (especially in the oil colors). Mixtures with pigments containing sulphur or its compounds are best avoided. When permanency is of first importance, use should not be made of Chrome Yellows.
*Cobalt Blue Oxide of Cobalt and Aluminum. WEBER Artist Cobalt Blue is used with safety in all painting techniques, perfectly permanent to light and air, transparent and dependable in mixtures with other reliable pigments.
*Cobalt Greens Compounds of Oxide of Cobalt and Zinc Oxide perfectly permanent in all painting techniques, semi-transparent, safe in mixtures with other dependable pigments. WEBER Artist Cobalt Greens possess the property of retaining their true color hue under artificial light.
*Cobalt Violets WEBER Artist Cobalt Violets are permanent transparent pigments derived from Cobalt, of little tinting strength, adaptable to all painting techniques and safe in admixtures with other pigments.
*Cobalt Yellow See Aureolin.

## WEBER ARTISTS PIGMENTS

**Cologne Earth
*Cork Black
*Crap Lake
*Crap Lake Ex. Deep
*Cremnitz White
*Crimson Lake
**Cypress Green

Synonymous with Vandyke Brown (which see).
A variety of carbon black obtained by charring cork, with considerable tinting strength and perfectly permanent in all techniques and mixtures with all safe pigments.

See Alizarin Lakes.
See Alizarin Lakes.

Basic Lead Carbonate, possessing all the best qualities of any White Lead, with greatest opacity, good color and permanency to light. Pigments containing lead are all sensitive to sulphur or its compounds, the black sulphide of lead being readily formed and should in consequence of this not be used in admixture with impure Cadmium Yellows, Ultramarine, Vermilions, etc. Cremnitz White is most permanent in oil, especially if protected by a film of varnish from sulphurous gases. Mixtures with pigments of animal and vegetable origin (Lake Colors, Gamboge, Carmine, Prussian Blues, etc.), are best regarded as of uncertain stability. WEBER Artist Cremnitz White (ground in the purest quality imported refined oil) remains white after complete oxidization (drying) of the oil. Its pleasant working consistency is a very desirable feature.

See Alizarin Lakes.
A permanent transparent lake color derived from coal tar, of deep rich hue with great tinting strength, yielding greens of exceptional color value with certain yellow lakes. Valued as an overglazing color.
**Delft Blue Light A semi-transparent color of reasonable permanence obtained by and Deep mixtures of Indigo and Ultramarine.
***Dragons Blood
***Dutch Pink
*Emerald Green

A deep rich red-brown resin of insufficient permanence of color to be considered desirable as an Artists' pigment.

See Brown Pink.
Cupric Aceto-Arsenite. A pigment of individual characteristic green hue, permanent to light, but readily acted upon by sulphur or its compounds, to form the black copper sulphide. In oil, when protected with a strong film of varnish greater permanency is assured than as a Water Color. Emerald Green is very dangerous to use in mixture with most pigments of organic origin and also with such metallic pigments that may contain free sulphur, or are in themselves otherwise not stable. Emerald Green is best used alone, avoid mixtures with Cadmium Yellows, Ultramarine, Vermilions, etc. This aceto-arsenite of copper is unquestionably the most poisonous of all pigments and should be used with caution, especially as a dry color.

## WEBER ARTISTS PIGMENTS

*Emeraude Green Synonymous with Oxide of Chromium, Transparent (which see).

*English Ver- See Vermilions. milion

*Flake White
WEBER Artist Flake White is an especially selected opaque variety of pure Zinc Oxide of exceptional tinting strength, permanent to light and not discolored by sulphurous gases, as are the Flake Whites of lead composition, being also more inert in mixtures with certain organic pigments and showing no discoloration with pigments containing sulphur. WEBER Artist Flake White Oil Color is ground in the finest imported pure refined oil, which after complete oxidization (drying) of the oil yields an elastic and durable film, retaining its true white color and cannot be recommended too highly to the fastidious Artist (See Zinc White.)

*Flesh Ochre A variety of natural ochre, having the permanent chemical and physical properties of the ochres in mixtures with other safe pigments, adaptable to the various painting techniques.
*French Blue See Ultramarines.
*French Ultra- See Ultramarines. marine
*French Vermilion See Vermilions.
***Gamboge
A semi-soluble gum resin of rich transparent yellow color, bleaching rapidly under exposure to strong sun-light and decomposed in mixture with many metallic pigments and raw earth colors.
**Geranium Lake The active coloring principle of WEBER Artist Gcranium Lake is a derivative of Coal Tar, yielding a transparent lake pigment with exceptional permanence and of strong tinting power: WEBER Artist Geranium Lake has only been developed in recent years, to replace the original very fugitive, aniline derivative, Geranium Lake. Mixtures with certain metallic pigments and raw earths are best regarded as of uncertain stability.

## **Green Crap Lakes

See Alizarin Lakes.

##  <br> 

## WEBER ARTISTS PIGMENTS

## *Green Lakes

**Harrison Red

**Hookers Greens
**Indian Purple
*Indian Red
**Indian Yellow
**Indigo
**Intense Blue
*Italian Ochre
***Italian Pink
*Ivory Black

Transparent lake colors derived from Coal Tar, of good permanence and valuable as overglazing colors.

A transparent lake color of practical permanence, made from a product of the modern dye-industry. Used principally as a substitute for the Vermilions, unsafe in mixture with certain metallic pigments and raw earth colors.

Mixtures of Gamboge and Prussian Blue, used only in Water Color. Of good color, but not very permanent.

Obtained by precipitating Alizarin Lake in the presence of Ultramarine Blue, to yield a semi-transparent moderately permanent color.

WEBER Artist Indian Red is of deep red, permanent and opaque color with bluish under-tone, consisting principally of a variety of iron oxide, perfectly dependable in all techniques and safe in admixture with other permanent pigments.

The genuine Indian Yellow is an impure magnesium and calcium salt of euxanthic acid, obtained from the urine of cows, native of Bengal and is usually associated with foreign mineral and organic matters, greatly affecting its permanence as a pigment. WEBER Artist Indian Yellow is an imitation, derived from Coal Tar, with greater tinting strength, brilliance and purity of color, possessing exceptional permanence as an Oil and Water Color pigment. Mixtures with certain metallic and raw earth pigments are to be regarded with suspicion.

An organic dye-stuff, extract of the Indigo Plant. Of fair tinting strength with reasonable permanence, more brilliant and permanent as a Water Color than as an Oil Color. Mixtures with certain metallic pigments and raw earth colors should be avoided.

An extract of Indigo of greater transparency and brilliancy, sharing the same chemical and physical properties of Indigo.
Synonymous with Raw Sienna.
See Brown Pink.
Of intense black color, principally carbon, with warm brownish under-tone, obtained by charring Ivory chips, drying well as an Oil Color. Adaptable to all painting techniques and safe in mixtures with all other permanent pigments.

WEBER ARTISTS PIGMENTS


#### Abstract

Kings Yellow **WEBER Artist Oil Color Kings Ycllow is a selected pale variety of Chrome Yellow of clear rich color, sharing the objectionable characteristics of the Chrome Yellows (which see). *WEBER Artist Water Color Kings Yellow is prepared from Cadmium Yellow and WEBER Artist Permalba to yield a permanent opaque color, safe in mixture with other pigments.


> *Lamp Black A rich carbon black, obtained from incomplete combustion of oils and fats, rich in carbon, of exceptional tinting strength, adaptable to all painting techniques, stable and inert in mixture with all other safe pigments, unaffected by impure air, gases, acids or bases.
> **Lemon Yellow Strontium Chromate. Of decided lemon huc, with good permanence and considerable transparency as an Oil and Water Color, unaffected by sulphurous gases and safe in admixture with other dependable pigments.

*Lemon Yellow Barium Chromate. Much weaker in color than Lemon Yellow (Barytes) (Strontium Chromate) but of greater permanence to light and equally as safe in mixtures with other permanent pigments.
*Light Red A variety of calcined natural Yellow Ochre of moderate tinting strength, perfectly permanent in all painting techniques and safe in mixtures with all other dependable pigments.
*Madder Carmine An Alizarin Lake (whiclı see).
*Madder Lake An Alizarin Lake (which see).
***Magenta
A very fugitive brilliant lake pigment, the coloring principle of which is a derivative of aniline. Undesirable as an Artist pigment owing to its lack of even reasonable permanency.
**Malachite Green Native Basic Copper Carbonate. Like all copper compound pigments Malachite Green is sensitive to sulphurous gases or compounds, the black sulphide of copper readily forming. Unsafe in mixture with any pigment containing uncombined sulphur. Where dependable permanency is desired, its use is best avoided.
*Mars Colors Mars Red, Mars Brown, Mars Orange, Mars Violet, Mars Yellow are all artificial ochres deriving their color from hydrate and oxide of iron. Especially the deeper hue Mars Colors are perfectly permanent and safe in mixtures with other dependable pigments.

## WEBER ARTISTS PIGMENTS

***Mauve
***Mauve No. 2
Megilp
*Mineral Violets
*Naples Yellows
**Neutral Tint
*New Blue
**Olive Green
**Olive Lake
**Orange Crap Lake
*Orange Vermilion
*Oxide of Chromium, Opaque

## *Oxide of Chromium,

 TransparentA true aniline lake of powerful tinting strength, exceedingly fugitive, unsafe in mixtures with most metallic pigments and raw earth colors. Where even moderate permanency is required, this brilliant reddish-violet hue color should not be employed.
Synonymous with Mauve, however, of bluish-violet hue.
WEBER Artist Megilp is prepared from the genuine Gum Mastic, Turpentine and Drying Oil, to obtain a gelatinous medium for use as a vehicle for Oil Colors. It should be employed with utmost care to insure durable results.

Synonymous With Permanent Violets.
The genuine Naples Yellows are compounds of Lead Antimoniate, which owing to their lead content are sensitive to sulphurous gases and are therefore imitated in hue to yield more permanent pigments. WEBER Artist Naples Yellows Oil and Water Colors are mixtures of Cadmium Yellow, Permalba and Venetian Red and as such are highly recommended for their permanence.

Mixtures of Indigo, Black and Alizarin Red, with good permanence as an Oil and Water Color.

See Ultramarine Blue.
Synonymous with Olive Lake. Used as a Water Color.
A lake color of good permanence, the coloring principle of which is derived from Coal Tar.

See Alizarin Lakes.

See Vermilions.

Sesquioxide of Chromium. The most durable, inert opaque green pigment on the Artist's palette, of dull hue, adaptable to all painting techniques, absolutely permanent under all influences usually detrimental to most other pigments.

Hydrated Sesquioxide of Chromium. Unquestionably the most useful and dependable transparent rich green pigment, adaptable to all painting techniques. WEBER Artist Emeraude and Viridian are very brilliant selected pure Oxides of Chromium and should be employed when absolute permanency is desired.

## WEBER ARTISTS PIGMENTS

> **Paynes Grey
> *Peach Black
> * Permalba

> A Permanent White

> Mixtures of Indigo, Black and Alizarin Red, with good permanence as an Oil and Water Color.

> A carbon black, comparing in chemical and physical properties to Lamp Black.

> WEBER Artist Permalba has been developed to exceptional opacity and tinting strength. Adaptable to all painting techniques, inert and stable in mixtures with other pigments, unaffected by impure air, perfectly permanent to light and yielding as an Oil Color, a durable and elastic film. WEBER Artist Permalba is essentially a compound of Barium Sulphate, containing no Lead or Zinc. When absolute permanency is desired, Permalba should be employed.

> In the fire which occurred at our factory, Dec. 1, 1921, test charts were exposed to water, smoke and considerable heat, It was of the greatest interest to note that the Permalba rub-outs showed not the slightest discoloration of pigment. This was not the case with other whites of lead and zinc base, of various makes, which all showed discoloration from deep brown to pale yellow.
*Permanent Blue See Ultramarines.
*Permanent A double salt of Phosphoric Acid with Manganese and AmViolets monium. Of true violet hue, permanent to light and safe in mixtures with other dependable pigments.
*Permanent White Synonymous with Permalba.
**Persian Red Synonymous with American Vermilion.
*Pink Madder An Alizarin Lake (which see).
*Prussian Blue Ferric Ferrocyanide. WEBER Artist Prussian Blue is of exceptional color strength and purity, having long been a specialty with us. As an Oil Color showing greater permanence under strong sun-light exposure, than as a Water Color. Mixtures with certain metallic and organic pigments (Vermilions, Cadmiums, Chromes, etc.) are best regarded as of uncertain stability.
**Prussian Green A mixture of Gamboge and Prussian Blue, used only as a Water Color, of moderate permanency only.
**Purple Lake
A transparent lake, prepared from a coal tar derivative, only moderately permanent.

## WEBER ARTISTS PIGMENTS

**Purple Madder Prepared from derivatives of Coal Tar, yielding a lake color of reasonable permanence.
***Pure Scarlet Mercuric Iodide. A fugitive, opaque vermilion hue pigment, used only as Water Color, rapidly becoming into disuse owing to its lack of permanency.
*Raw Sienna Natural Italian earth pigment, semi-transparent with golden yellow under-tone. Perfectly permanent and reliable in all painting techniques, safe in mixtures with all other dependabie pigments. Mixtures with the organic pigments are best considered of doubtful durability:
*Raw Umber A natural Italian earth pigment, deriving its color from the oxides of iron and manganese, having chemical and physical properties common to the Ocbres, sharing their dependable permanency and stability.
**Red Brown Crap See Alizarin Lakes. Lake
** Red Lead
*Roman Ochre $\begin{gathered}\text { Natural Italian earth pigment selected for its purity of color, } \\ \text { having the permanent chemical and physical properties }\end{gathered}$
*Roman Ochre Natural Italian earth pigment selected for its purity of color, common to the Ochres.
**Roman Sepia Used as a Water Color pigment. Obtained by mixture of Sepia and Burnt Sienna.
**Rose Carthame The coloring principle of this transparent brilliant lake is a derivative of Coal Tar. It is a modern pigment of good permanency.
**Rose Dorée Sce Alizarin Lakes.
*Rose Madder
See Alizarin Lakes. This color has long been a specialty with us, its transparent clear color giving it desirable preierence.
*Rose Madder, Synonymous with Rose Madder, however of deeper hue. Deep
***Rose Pink
An Oxide of Lead. Used and known by the ancients as Mimium. Owing to its lead content, it is not desirable as an Artist pigment, suffering discoloration in preserice of sulphur gases or its compounds. Easily and more safely replaced by the genuine Vermilions.

A fugitive lake of dull rose-red color, prepared from Brazil wood, not sufficiently permanent for Artists' use.

# F.WEBERCO. $P \quad H \quad I \quad A \quad D \quad E \quad L \quad P \quad H \quad I A$ ST. LOUIS 

## WEBER ARTISTS PIGMENTS

| **Rubens Madder | See Alizarin Lakes. |
| :---: | :---: |
| **Safflower Red | Synonymous with Rose Carthame. |
| **Sap Green | A transparent lake, prepared from Coal Tar, of fair permanence. |
| **Saturn Red | Synonymous with American Vermilion. |
| **Scarlet Crap Lake | See Alizarin Lakes. |
| **Scarlet Lake | Synonymous with WEBER Artist Geranium I.ake in physical and chemical properties, but of scarlet hue. |
| *Scarlet Vermilion | See Vermilions. |
| **Sepia | Obtained from the dried ink-bag of species of cuttle-fish. As, a Water Color this genuine coloring matter is used to yield a pigment of good permanence. In Oil Color, Sepia is an imitation prepared from Vandyke Brown and Lamp Black and as such is of fair permanence. |
| *Silver White | Compound of Barium Sulphate and Zinc Sulphide. The most intensely white color of the white pigments, possessing good stability and opacity, inert in mixtures with safe pigments and not discolored by sulphurous gases or compounds. |
| *Sky Blue | Mixture of Ultramarine and Permalba and as such can be accepted as a permanent oil color. This same mixture is employed as a Water Color under the name Azure Blue. |
| **Strontian Yellow | Synonymous with Lemon Yellow. |
| Sugar of Lead | Acetate of Lead Used as a quick dryer for Oil Paints, Should be used with greatest care, owing to its lead content and property of causing cracking if not properly employed. |
| * Terra Rosa | An artificial earth pigment, deriving its color from an iron oxide, ranking high with the most permanent and stable pigments. |
| *Terre Verte | A native green earth of individual characteristic hue, safe in mixtures with other unalterable pigments and of good permanence. |

## WEBER ARTISTS PIGMENTS

> *Transparent Gold Ochre
> **Transparent Green
> *Transparent White
> *Ultramarines
> Artificial Ultramarine (the genuine Ultramarine was originally only obtained from Lapis Lazuli) of varying hues, i. e., Permanent Blue, New Blue and French Blue, of exceptional color value, perfectly permanent and safe in mixtures with other durable pigments. Owing to sulphur content, mixture with lead on copper colors is best regarded as of uncertain stability.

**Vandyke Brown A natural earth pigment of questionable permanence, owing to its varied composition.
*Venetian Red WEBER Artist Venetian Red is an artificial red earth of individual characteristic hue, long a specialty with us. Safe and permanent in all painting techniques and gives durable mixtures with other unalterable pigments.
***Verdigris Basic Copper Acetate. Unsafe as an Oil and Water Color, readily discoloring in presence of sulphurous gases or compounds.
*Vermilions Varieties of Sulphide of Mercury. Should contain no excess of Sulphur, if pure. WEBER Artist Vermilions are all pure pigments, prepared in various hues, i. e., Orange Vermilion, Chinese Vermilion, English Vermilion, French Vermilion, Scarlet Vermilion, Vermilion and Vermilion Pale. All are opaque and of exceptional permanence under exposure to subdued light. Owing to sulphur content mixtures with lead and copper pigments are best avoided.

[^3]
## WEBER ARTISTS PIGMENTS

*White Lead Lake<br>**Yellow Lake

**Yellow Crap Synonymous with Alizarin Yellow.
**Yellow Madder Synonymous with Alizarin Yellow.
*Yellow Ochre Very carefully selected natural French Ochre, of most permanent chemical and physical properties, adaptable to all painting techniques, safe in admixture with other durable pigments. Mixtures with organic lake colors are best regarded with suspicion owing to presence of iron hydrate, the resultant color is likely to change slightly.
*Zinc White
**Zinc Yellow
Basic Lead Carbonate. Synonymous with Cremnitz White, which latter is a specially prepared variety of this pigment of more desirable physical properties than the ordinary White Leads.

A rich transparent lake of good permanence, the coloring principle of which is obtained from derivatives of Coal Tar.
xide of Zinc. WEBER Artist Zinc White has long been appreciated for its pleasant working consistency and opacity. Of pure white color, permanent to light and air, with greater tinting strength than Cremnitz White and yielding a very durable and elastic film by being ground in pure imported refined oil. Is of good stability in mixtures with dependable pigments, not discolored by sulphurous gases or compounds. If applied too impasto, Zinc White shows a tendency to cause cracking.

Zinc Chromate. Of rich lemon hue, adaptable to Oil and Water Color painting, of good permanency but unsafe in mixture with most organic pigments and lake colors.

[^4]

## Oil Painting Materials

WEBER FINELY PREPARED ARTISTS' OIL COLORS

In Collapsible Tubes

REGULAR OR SINGLE SIZE TUBES

$21 / 4 x^{1 / 2}$ inch

$4 x^{1} / 2$ inch

## WEBER ARTISTS' OIL COLORS IN SINGLE SIZE TUBES <br> CLASS A

In $4 \times \frac{1}{2}$-inch tubes .... Per tube,

| 0 | S P | American Vermilion |
| :---: | :---: | :---: |
| T | P | Antwerp Blue |
| S T | S P | Asphaltum |
| S T | S P | Bitumen |
| 0 | P | Blue Black |
| S T | S P | Bone Brown |
| 0 | P | Brilliant Yellow |
| T | P | Brown Ochre |
| T | S P | Brown Pink |
| S T | P | Burnt Roman Ochre |
| T | P | Burnt Sienna |
| S T | P | Burnt Terre Vertc |
| S T | P | Burnt Umber |
| S T | P | Caledonian Brown |
| S T | P | Cappah Brown |
| S T | P | Cassel Earth |
| T | P | Chinese Blue |
| 0 | S P | Chrome Green, 1, Light |
| 0 | S P | Chrome Green, 2, Med. |
| 0 | S P | Chrome Green, 3, Deed |
| 0 | S P | Chrome Lemon |
| 0 | $S$ P | Chrome Yellow |
| 0 | S P | Chrome Yellow, Medium |
| 0 | S P | Chrome Yellow, Deep |
| 0 | S P | Chrome Orange |
| S T | P | Cologne Earth |
| 0 | P | Cork Black |
| 0 | P | Cremnitz White |
| S T | S P | Emerald Green |
| 0 | P | Flake White |
| S T | P | Flesh Ochre |
| 0 | P | Indian Red |
| S T | P | Italian Ochre |
| 0 | P | Ivory Black |

Per dozen tubes ....

| 0 | S P | King's Yellow |
| :---: | :---: | :---: |
| 0 | P | Lamp Black |
| O | P | Light Red |
| T | P | Megilp |
| 0 | P | Naples Yellow, Greenish |
| 0 | P | Naples Yellow, Light |
| 0 | P | Naples Yellow, Medium |
| 0 | P | Naples Y ellow, Deep |
| 0 | P | Naples Yellow, Reddish |
| S T | P | Neutral Tint |
| S T | P | New Blue |
| T | F | Olive Green |
| 0 | P | Permalba |
| S T | P | Permanent Blue |
| T | P | Prussian Blue |
| S T | P | Raw Sienna |
| S T | P | Raw Umber |
| S T | P | Roman Ochre |
| 0 | P | Silver White |
| T |  | Sugar of Lead |
| 0 | P | Sky Blue |
| 0 | P | Terra Rosa |
| S T | P | Terre Verte |
| T | P | Transparent Gold Ochre |
| S T | S P | Vandyke Brown |
| 0 | P | Venetian Red |
| S T | P | Yellow Ochre |
| 0 | P | Zinc White |
| 0 | P | Zinc Yellow |
| O | S P | Zinnober Green, Pale |
| 0 | $S$ P | Zinnober Green, Light |
| 0 | S P | Zinnober Green, Medium |
| 0 | S P | Zinnober Green, Deep |

KEY.

P -Permanent (To light).
S P-Semi-Permanent.
F - Fugitive.

T - Transparent.
S T-Semi-Transparent.
O -Opaque.

## WEBER ARTISTS' OIL COLORS-Continued

## IN SINGLE SIZE TUBES

## CLASS B

In $2 \frac{1}{4} \times \frac{1}{2}$-inch tubes $\ldots \ldots$. Per tube,

| T | P | Carmine Lake |
| :---: | :---: | :---: |
| T | P | Crimson Lake |
| T | P | Geranium Lake |
| S T | F | Indigo |
| T | F | Italian Pink |
| T | F | Magenta |
| T | F | Mauve |
| T | F | Mauve, No. 2 (Bluish) |

Per dozen,

| T | F | Olive Lake |
| :---: | :---: | :--- |
| T | F | Purple Lake |
| T | F | Rose Pink |
| T | P | Rose Carthame |
| T | P | Scarlet Lake |
| T | S P | Sap Green |
| T | P | Sepia |
| T | S P | Yellow Lake |

CLASS F
In $2 \frac{1}{4} \times \frac{1}{2}$-inch tubes $\ldots \ldots$........er tube, Per dozen,

| T | P | Alizarin Carmine | 0 | P | Delft Blue, Deep |
| :---: | :---: | :---: | :---: | :---: | :---: |
| T | P | Alizarin Crimson | 0 | P | Delft Blue, Light |
| T | P | Alizarin Green | T | F | Gamboge |
| T | P | Alizarin Orange | T | P | Harrison Red |
| T | P | Alizarin Scarlet | T | P | Transparent Green |
| T | P | Alizarin Yellow | T | P | Transparent White |
| T | P P | Brown Madder Cypress Green |  |  | (For reducing Lakes) |

CLASS G
In $2 \frac{1}{4} \times \frac{1}{2}$-inch tubes ........... Per tube,

| T | F | Carmine, No. 2 | 0 | P | French Vermilion |
| :---: | :---: | :---: | :---: | :---: | :---: |
| T | P | Chinese Orange | T | P | Green Crap Lake |
| 0 | P | Chinese Vermilion | T | S P | Indian Yellow |
| S T | P | Cobalt Green, Light | ST | P | Lemon Yellow |
| S T | P | Cobalt Green, Medium | T | P | Madder Lake |
| ST | P | Cobalt Green, Deep | T | S P | Malachite Green |
| T | P | Crap Lake | 0 | P | Mars Orange |
| T | P | Emeraude Green | 0 | P | Mars Yellow |
| 0 | P | English Vermilion | T | P | Orange Crap Lake |
| 0 | P | French Ultramarine | 0 | P | Orange Vermilion |


WEBER ARTISTS' OIL COLORS-Continued

IN SINGLE SIZE TUBES
CLASS G-Continued

| T | P | Oxide of Chromium, Transparent | $\begin{aligned} & \mathrm{T} \\ & \mathrm{~T} \end{aligned}$ | P | Rose Madder <br> Rose Madder, Yellowish |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | P | Oxide of Chromium, | T | P | Scarlet Crap Lake |
|  |  | Opaque | 0 | P | Scarlet Vermilion |
| T | P | Pink Madder | S T | P | Strontian Yellow |
| T | P | Purple Madder | T | P | Viridian |
| T | P | Red Brown Crap Lake | T | P | Violet Crap Lake |
| T | P | Rose Dorée | T | P | Yellow Crap Lake |

CLASS H
In $2 \frac{1}{4} \times \frac{1}{2}$-inch tubes $\qquad$ Per tube,

Per dozen,

| S T | P | Cadmium Citron | S T | P | Cadmium Red |
| :---: | :---: | :---: | :---: | :---: | :---: |
| S T | P | Cadmium Yellow, Light | 0 | P | Cerulean Blue |
| S T | P | Cadmium Yellow, Med. | T | P | Cobalt Blue |
| S T | P | Cadmium Yellow, Deep | T | P | Cobalt Violet, Light |
| S T | P | Cadmium Orange | S T | P | Cobalt Violet, Deep |

CLASS I
In $2 \frac{1}{4} \times \frac{1}{2}$-inch tubes $\qquad$ Per tube,
Per dozen,

| S T | P | Aureolin | S T | P | Cobalt Yellow |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ST | F | Burnt Carmine | T | P | Crap Lake, Extra Deep |
| T | P | Capucine Madder | T | P | Rose Madder, Deep |
| T | F | Carmine | T | P | Yellow Madder |

CLASS K
In $2 \frac{1}{4} \times \frac{1}{2}$-inch tubes $\ldots \ldots \ldots$. Per tube, Per dozen,

| S T | P | Aurora Yellow | T | F | Violet Carmine |
| :--- | :--- | :--- | :--- | :--- | :--- |

## WEBER FINELY PREPARED ARTISTS' OIL COLORS



## CLASS A

In $4 \times \frac{3}{4}$-inch tubes

American Vermilion
Antwerp Blue
Asphaltum
Bitumen
Blue Black
Brilliant Yellow
Bone Brown Brown Ochre Brown Pink Burnt Roman Ochre Burnt Sienna Burnt Terre Verte Burnt Umber Caledonian Brown Cappah Brown Cassel Earth Chinese Blue Chrome Lemon Chrome Yellow Chrome Yellow, Medium Chrome Yellow, Deep Chrome Orange
per tube,
Chrome Green, 1, Light Chrome Green, 2, Med. Chrome Green, 3, Deep Cologne Earth
Cork Black
Cremnitz White
Emerald Green
Flake White
Flesh Ochre
Indian Red
Italian Ochre
Ivory Black
King's Yellow
Lamp Black
Light Red
Megilp
Naples Yellow, Greenish
Naples Yellow, Light
Naples Yellow, Medium
Naples Yellow, Deep
Naples Yellow, Refdish
Neutral Tint

Per dozen,
New Blue
Olive Green
Permalba
Permanent Blue
Prussian Blue
Raw Sienna
Raw Umber
Roman Ochre
Silver White
Sugar of Lead
Terra Rosa
Terre Verte
Transparent Gold Ochre
Vandyke Brown
Venetian Red
Yellow Ochre
Zinc White
Zinc Yellow
Zinnober Green, Pale
Zinnober Green, Light
Zinnober Green, Medium
Zinnober Green, Decp

## F.Weberco. <br> $P \quad H \quad I \quad A \quad D \quad E \quad P \quad H \quad A$ ST. LOUIS

## WEBER ARTISTS' OIL COLORS-Continued

## In Double Size Tubes CLASS B

$$
\text { In } 4 \times \frac{1}{2} \text {-inch tubes }
$$

Carmine Lake
Crimson Lake
Geranium Lake
Indigo
Italian Pink
Magenta
$\qquad$ Per tube,
Mauve
Mauve, No. 2 (Bluish)
Olive Lake
Purple Lake
Rose Pink

## CLASS F

In $4 \times \frac{1}{2}$-inch tubes
Alizarin Carmine
Alizarin Crimson
Alizarin Green
Alizarin Orange
Alizarin Scarlet
Alizarin Yellow
Brown Madder
Cypress Green
Delft Blue, Deep
Delft Blue, Light

## CLASS G

$$
\text { In } 4 \times \frac{1}{2} \text {-inch tubes }
$$

Carmine, No. 2
Chinese Orange
Chinese Vermilion
Cobalt Green, Light
Cobalt Green, Medium
Cobalt Green, Deep
Crap Lake
Emeraude Green
English Vermilion
French Ultramarine
French Vermilion
............. Per tube,
Indian Yellow
Lemon Yellow Madder Lake Malachite Green Mars Orange Mars Yellow Orange Crap Lake Orange Vermilion Oxide of Chromium, Transparent

## CLASS H

In $4 \times \frac{1}{2}$-inch tubes Cadmium Yellow, Light Cadmium Yellow, Med.
. Per tube,
Cadmium Yellow, Deep Cadmium Orange

## CLASS I

| In $4 \times \frac{1}{2}$-inch tubes | .............Per tube, |
| :--- | :--- |
| Aureolin | Carmine |
| Burnt Carmine | Cobalt Yellow |
| Capucine Madder | Crap Lake, Extra Deep |

Carmine

Crap Lake, Extra Deep

Per dozen,
Rose Carthame
Sap Green
Scarlet Lake
Sepia
Yellow Lake

Per dozen,
Gamboge
Harrison Red
Transparent White
(For reducing Lakes)
Transparent Green

Per dozen,
Oxide of Chromium,
Opaque
Pink Madder
Purple Madder
Red Brown Crap Lake
Rose Madder
Rose Madder, Yellowish
Scarlet Crap Lake
Scarlet Vermilion
Strontian Yellow
Viridian

Per dozen,
Cerulean Blue
Cobalt Blue

Per dozen, Rose Dorée
Rose Madder, Deep
Yellow Madder

## WEBER ARTISTS' OIL COLORS-Continued

# In Double Size Tubes <br> CLASS K 

In $4 \times \frac{1}{2}$-inch tubes...... .....Per tube, Per dozen,
Aurora Yellow
Violet Carmine

# Large Size Tubes of Whites <br> CLASS C 

In Treble size tubes, $4 \times 1$ inch .... Per tube, Per dozen,

| Cremnitz White | Flake White |
| :--- | :--- |
| Permalba | Zinc White | Silver White

## CLASS D

In $\frac{1}{2}$-pound or Quadruple size tubes, $6 \times 1$ inch .. Per tube, Per dozen,
Cremnitz White Flake White Silver White Permalba Zinc White

## CLASS E

In Pound tubes, $6 \times 1 \frac{1}{2}$ inch .... Per tube,

Cremnitz White
Permalba

Flake White
Zinc White

Per dozen, Silver White

## FOUNDATION WHITE

## An Inexpensive White for Backgrounds

In $\frac{1}{2}$-pound or Quadruple size tubes, $6 \times 1$ inch .. Per tube, Per dozen, In Pound cans, friction lids .... Per can, Per dozen,
Testimonial Pamphlet and Color Cards Furnished on Application to Schools,
Academies and Dealers

## WEBER SPHINX MEDIUM For Oil Color Painting

Sphinx Medium mixed with the Oil Colors bears out the Colors and produces that high lustre so peculiar with the Paintings of our old Masters, but unlike other Mediums does not crack or change the colors in old age, as it contains no lead or other injurious matter which turns dark in time.
$\mathrm{O}_{\mathrm{n}}$ absorbent grounds it is especially useful.
For restoring old Oil Paintings it has no equal, as by rubbing it on with a soft rag it will remove the bloom and restore the varnish to its former transparency and lustre.

It dries well and is being used by leading Artists, who pronounce it of superior quality and usefulness.

In treble size tube, $4 \times 1$ inch only, per tube, Per dozen,

# FWEBERCO $P \quad H \quad I \quad L \quad A \quad D \quad E \quad L \quad P \quad H \quad I \quad A$ 

# WEBER ARTISTS' OIL COLORS 

## In Studio Size Tubes



All in Tubes $4 \times 1$ inch
CLASS A-Price,

American Vermilion
Antwerp Blue
Blue Black
Burnt Sienna
Burnt Umber
Chrome Green, Light
Chrome Green, Medium
Chrome Green, Deep
Chrome Lemon
Chrome Yellow
Chrome Yellow, Deep
Chrome Orange
Cremnitz White

Emerald Green
Flake White Flesh Ochre Indian Red Ivory Black Lamp Black Light Red
Naples Yellow, Light Naples Yellow, Medium Naples Yellow, Deep New Blue
Permalba
Permanent Blue

CLASS B-Price,
Crimson Lake Geranium Lake Mauve

Rose Carthame Scarlet Lake
per Tube
Yellow Lake
Zinc Yellow

Alizarin Crimson Alizarin Green Alizarin Scarlet

## per Tube

Sepia
Transparent Green

Cerulean Blue
Chinese Vermilion
Cobalt Blute
Emeraude Green
English Vermilion
French Ultramarine
per Tube
Prussian Blue
Raw Sienna
Raw Umber
Terre Verte
Transparent Gold Ochre
Vandyke Brown
Venetian Red
Yellow Ochre
Zinc White
Zinnober Green, Light
Zinnober Green, Medium
Zinnober Green, Deep

CLASS C-Price,
Brown Madder Gamboge Harrison Red

CLASS D-Price,

French Vermilion Indian Yellow Lemon Yellow Madder Lake Orange Vermilion Oxide of Chromium,
Transparent
per Tube
Oxide of Chromium, Opaque
Rose Madder
Scarlet Vermilion
Viridian

Aureolin
Cadmium Citron
Cadmium Yellow, Light

CLASS E-Price,
Cadmium Yellow, Med. Cadmium Yellow, Deep Cadmium Orange
per Tube
Cadmium Red
Carmine
Cobalt Yellow

## PERMALBA

## An Artists' Permanent White

In Weber Permalba, we believe to have attained chemical and physical properties, not possessed by any other opaque White pigment.

Permalba has been accepted only after having undergone an experimental stage, extending over a period of five years, in which the following characteristics have been developed:
1 - Permalba will not discolor with age.
2 - Permalba remains unaffected upon exposure to light, impure air, and gases.
3 - Permalba is chemically stable and inert towards other pigments in mixtures.
4 - Permalba is unaffected by any vehicles or mediums of any painting technique.
5 - Permalba does not contain any Lead or Zinc.
6-Permalba is non-toxic.
7-Permalba is acid and alkali resistant.
8-Permalba is not discolored by sulphur gases or sulphur compounds.
9 - Permalba ranks high with the most opaque pigments having exceprionat covering power.
10 - Permalba with colors, yields tints of exceptional brilliancy and true color value.
11 - Permalba docs not affect and is itself not affected in mixtures with any other safe pigment.
12 - Permalba photographs white.
13 - Permalba Oil Color is ground only in the purest imported Poppy Oil, with which an elastic film is obtained after complete oxidization (drying) of the oil, with no tendency to crack or become horny and friable, and if finally protected by an application of varnish, an unalterable result is assured.

## WEBER PERMALBA

OIL COLOR
Each Dozen

## WATER COLOR

Each Dozen

$$
\text { Tubes, } \frac{3 \times 27}{}
$$

Studio size
oz jar dubes, axtim.
1-oz. jar
2-1b, jar

## TEMPERA

Tubes, $3 x 4$ in., Each.

In the fire, which occurred at our factory December 1, 1921, test charts were exposed to Water, smoke and considerable heat. It was of the greatest interest to note that the Permalba rub-outs showed not the slightest discoloration of pigment. This was not the case with other whites of lead and zinc base, of various makes, which all showed discoloration from deed brown to pale yellow.

## WEBER MAT DRYING OIL COLORS

Especially prepared, at request of several eminent Artists, for mural painting. As implied by the title the colors dry mat and with great depth and color value.

## CLASS A

In tubes $\frac{3}{4} \times 4$ in., excepting such marked $* *$, which are supplied in tubes $\frac{1}{2} \times 4 \mathrm{in}$. Per Tube,

| Burnt Sienna <br> Burnt Umber | **Geranium Lake, Per- | Permalba |
| :--- | :---: | :--- |
| Chrome Yellow, Light | Indian Red | Prussian Blue |
| Chrome Yellow, Med. | Ivory Black | Raw Sienna |
| Chrome Orange | Lamp Black | Raw Umber |
| Chrome Green, Med. | **Permanent Blue | Vandyke Brown |
| $* *$ Emerald Green |  | Venetian Red |

## CLASS F

In tubes $\frac{1}{2} \times 4 \mathrm{in}$. Per tube,
Alizarin Crimson
Brown Madder

## CLASS G

In tubes $\frac{1}{2} \times 4 \mathrm{in}$. Per tube,

Emeraude Green
English Vermilion

French Ultramarine
Lemon Yellow

Scarlet Vermilion

CLASS H
In tubes $\frac{1}{2} \times 4$ in. Per tube,
Cadmium Yellow, Light Cadmium Orange Cobalt Blue
Cadmium Yellow, Med. Cerulean Blue

## WHITES

In tubes $1 \times 6$ in. ...... Each,
Flake White
Cremnitz White
In tubes $3 \times 4$ in. ....... Each,
Zinc White
Permalba

NOTE-Other colors made up to order in minimum quantities of 36 tubes.

## WEBER DECORATORS' OIL

## COLORS

Inexpensive oil colors especially prepared for decorators and students.

Well ground in linseed oil and selected for strength of color and permanency.

## All in Tubes 1 x 6 inches

CLASS A-Price,
Burnt Sienna
Burnt Umber
Cerulean Blue (imit.)
Chrome Green, Light Chrome Green, Medium Chrome Green, Deep Chrome Yellow, Light Chrome Yellow, Medium Chrome Orange Decorators ${ }^{\text {t White }}$ Foundation White

CLASS B-Price,
Emerald Green
Lemon Yellow
Prussian Blue
Vermilion, Dec.
CLASS C-Price,
per Tube Indian Red Ivory Black Lamp Black Raw Sienna Raw Umber Sepia (imit.) Ultramarine Vandyke Brown Venetian Red Yellow Ochre

## per Tube

 Violet Viridian (Imitation) Yellow Lake Zinc Greenper Tube Crimson Lake Crimo lake


## RETAILERS' COLOR CASES

Oil Color Case, with 70 spaces,
Water Color and Pastel Cabinet. with 3 drawers
Special Sizes on Application

# WEBER ARTIST OILS, VEHICLES, VARNISHES AND MEDIUMS 

## WEBER ARTIST OILS AND VEHICLES

Poppy Oil

Linseed Oil, Refined

Only the purest, well-seasoned, cold-pressed, clear and colorless oil, expressed from the seeds of the opium poppy, is imported and bottled by us. Cannot be too highly recommended for use with Artist Fine Colors, especially with Whites and with those pigments which are in themselves good dryers. Pure Poppy Oil is only slightly slower in drying than pure Linseed Oil. The too frequent use of dryers with painting oils very often causes the oils to darken slightly upon ageing.

Purified and refined finest quality Linseed Oil, expressed from flax seed, containing no free mineral acids. Thoroughly dependable to use with all pigments and is free from any lead or other artificial dryers. In every way identical with raw Linseed Oil, differing only in that the Refined is of very pale color and always absolutely pure.

Nut Oil

Light Drying Oil

Dark Drying Oil

A pale oil expressed from walnuts. Very similar to Poppy Oil in physical characteristics. A slower dryer than Lirseed Oil.

Prepared from pure Linseed Oil, Turpentine and Drying Oil. An ideal vehicle for all pigments, used especially on less absorbent painting grounds, drying well and of pale color. Can be most highly recommended for general use.

Linseed Oil specially prepared with a strong siccatiff to obtain a quick drying oil. Owing to lead content and strong siccative character, this compound should be only employed for commercial use. With Mastic Varnish a gelatinous substance known as Megilp is obtained, which many Artists employ as a vehicle, however to be used with caution to insure the most desirable results.

A very volatile, thin, colorless, redistilled Turpentine; derived from the exudation of various pine trees, used generally in conjunction with Oils, and as a thimer or solvent for Varnishes or Varnish Gums.

## WEBER ARTIST OILS AND VEHICLES

Siccatiff de

Courtray

A powerful compound manganese and lead dryer. This preparation should be used very sparingly and with utmost caution, as abuse of same tends to cause cracking and darkening of the finished painting. Only a very small addition of Siccatiff de Courtray to slow drying colors, is necessary to hasten oxidization (drying) of the oil.

Siccatiff de.Harlem A preparation composed of boiled linseed oil, turpentine and drying oil. A much slower drying compound than Siccatiff de Courtray.

Painting Oil No. 1 A very pale and slow drying vehicle, composed of Gum Mastic, Poppy Oil and Turpentine, giving decided brilliancy and pleasant working consistency to oil paints with which it is used, but not recommended when absolute durability and permanency is important.

Painting Oil No. 2 A more quicker drying vehicle than No. I Painting Oil. Of darker color, prepared from the finest Gum Copal, Turpentine, Refined Linseed Oil and Drying Oil. 1is use as a vehicle gives decided brilliancy and pleasant working consistency to oil paints, but is not recommended where absolute permanency and durability is essential.

## WEBER ARTIST VARNISHES

Sphinx Retouching A quick drying, light body, colorless Retouching Varnish, Varnish composed of a special blend of extra fine selected light Varnish Guns, with a very volatile dilutent. Contains no artificial dryers. Sphinx Retouch Varnish does not bloom and cannot be excelled for the purpose for which it is intended, namely, as a light varnish to be applied over parts of a picture which have dried flat in places; over paints not entirely dry in order that further application of paints may be made; or applied to recently finished paintings to protect them sufficiently until completely dry when an application of a more protective varnish film should be applied. (See Picture Mastic Varnish.)

## WEBER ARTIST VARNISHES

WEBER French Retouching Varnish

WEBER Retouching Varnish for

A blend of light varnish gums cut with Alcohol. Can be favorably compared to Sphinx Retouching Varnish in physical properties, however possessing tendency to bloom if applied in humid or wet weather.

Prepared from a blend of light varnish gums of very pale color. Very desirable for application to finished Water Color paintings, giving a durable, protective coveringt and adding brilliancy to the colors. Should not be applied unless the painting is thoroughly dry.

Copal Varnish, Best Picture

Selected imported Copal Gums of very pale color dissolved in Drying Oil and Turpentine. This varnish yields an exceedingly durable and elastic varnish film, giving protection to a finished painting. Should not be applied to a picture unless same is thoroughly dry throughout, as cracking is likely to occur, if only the surface of the painting is dry before application. Copal Varnishes are very hard and tedious to remove when necessary during restoration of aged paintings, as they do not respond readily to the ordinary solvents, as do the Mastic or Damar Varnishes. Thin with Turpentine when necessary.

Copal Varnish In physical properties, this varnish is similar to the WEBER Genuine Extra Pale

Picture Copal Varnish, prepared, however, of the very finest selected imported palest Copal Gums. Contains no artificial dryers and is in consequence slow drying. This varnish cannot be excelled for its high protective qualities, durability and pale color. Thin with Turpentine when necessary.

## WEBER ARTIST VARNISHES

Damar Varnish

Mastic Varnish
Genuine Full Strength

Prepared from the finest selected true Singapore white damar gum, cut with Turpentine to obtain a very durable and flexible clear varnish. Contains no artificial dryers, WEBER Damar Varnish gives high gloss and strong protection to finished paintings, greatly increasing the brilliancy of the colors. Damar Varnish responds readily to the ordinary solvents employed in the removal of aged varnish films during restoration of the paintings. Thin with Turpentine when necessary.

Prepared from the finest selected extra pale genuine Gum Mastic, cut with purified Turpentine. Contains no artificial dryers. WEBER Mastic Varnish is too strong for use on pictures, being principally employed in connection with WEBER Dark Drying Oil to prepare a gelatinous medium known as Megilp, which is valued by some Artists to obtain greater brilliancy and lustre, but which should be used with caution to insure durable results. WERER Mastic Varnish should be reduced to half strength with Turpentine when to be applied as a protective film, over finished paintings.

Picture Mastic Varnish

White Shellac
Varnish

Tempera Mat
Varnish

Prepared from WEBER Mastic Varnish by reducing the strength to the proper consistency for the varnishing of paintings. Mastic Varnishes in presence of moisture are likely to bloom and should therefore be applied very carefully. WEBER Picture Mastic Varnish is of exceptional pale color and affords a very protective covering to pictures, also greatly increasing the brilliancy and color value of the painting. Aged films of Mastic Varnish respond readily to the ordinary solvents employed during restoration. Thin with Turpentine when necessary.

Prepared from extra pale bleached Gum Shellac, in alcohol. This varnish dries very rapidly, with high gloss finish. During application, moisture will cause Shellac Varnishes to bloom. WEBER White Shellac Varnish applied to Posters, etc., executed with WEBER Sphinx Show Card Colors, will produce very brilliant results.

A solution of refined bleached pure wax. When applied over Oil or Tempera paintings a dull finish is obtained which also somewhat subdues the color value of the painting.

## WEBER FIXATIFS

Sphinx Fixatif A superior grade of Fixatif prepared from a blend of se-
lected pale gums. This almost colorless fixatif can not be
too highly recommended for use in fixing the most deli-
cate pastel tones, charcoal or crayon drawings, etc..
without preceptibly darkening any tints.

## WEBER SUNDRY LIQUIDS AND PREPARATIONS

Salamander, a
Restorative for Oil Paintings

This restorative for oil paintings is prepared from essential oils and balsams of careful selection. Salamander applied to old oil paintings will restore the color brilliancy and rejuvenate aged varnish films without any injurious effect upon the painting. After a painting has been treated with Salamander, an application of Picture Mastic Varnish will help retain the brilliancy restored by this preparation. Salamander will also very effectively remove bloom from varnishes. Salamander is absolutely safe and harmless, containing no injurious chemicals and has received highest recommendations for its cleaning and restorative properties.

Mixing Preparation A vehicle to be used with oil colors to prevent their spreading when painting on silk, paper, wood, etc.

Japan Gold Size A very strong dryer, prepared from a thin solution of Copal Varnish, Siccatiff and Turpentine. When mixed too freely with oil colors, this preparation is likely to cause cracking and darkening of the paints. Its principal use is in connection with the application of Gold Leaf.

Transparency This preparation is used in transparentizing papers, parchLiquid ments, blue-prints, tracings, lamp-shades, etc. A durable result is obtained with one application.

## WEBER OILS, SICCATIFS AND VARNISHES

All Our Oils Are Purified and of Best Quality



OILS
$\begin{array}{cccc}\text { 1-oz Bottles } & 21 / 2-\mathrm{oz} \text {. Bottles } & \text { Per Per } \\ \text { Bottle Doz. } & \text { Bottle Doz. } & \text { Pint Quart }\end{array}$
Drying Oil, pale

## dark

Linseed Oi1, White Refined .............
Nut Oil
Poppy Oil
Spirits of Turpentine, rectified
Japanned Gold Size
Sicatiff de Courtray, F. W. Co's
Sicatiff Harlem, F. W. Co.'s
WEBER "MIXING PREPARA'CION"
This preparation, mixed with Oil Colors, will prevent the oil from spreading when used on Paper, Satin or Wood.

In 2d-oz, bottles ....... Per bottle, Per dozen,

## WEBER PAINTING OIL

This is a preparation used for mixing with Oil Colors in place of the ardinary oils or siccatifs. It brings out the colors to their full intensity and brilliance, and acts as a drier, at the same time preventing cracking of the colors.

No. 1. Very pale in color, slow drying
No. 2. Amber color, quick drying ...

## WEBER SALAMANDER

A good preparation for removing the bloom on oil paintings, and restoring the lustre of old varnish. If carefully applied will bring out the lost tones of colors on old paintings. Directions-Rub in well with a linen or cotton rag, on the varnished surface, and let it dry thoroughly. Contains no injurious chemicals.

Price, per $2 \frac{1}{2}$-oz. bottles, Per dozen,

## "SPHINX" RETOUCHING VARNISH

For Oil Painting

PROPERTIES-This retouching Varnish serves to blend the different layers of color; but must not be mixed with the paint. It is advisable to always apply a little of it to such places that are intended to be painted over, or over such colors that have dried flat. It does not bloom and remains flexible. A thin coat over a freshly painted picture will protect it against dust, etc. It is of the greatest pliability.

APPLICATION-Flow the same lightly over the painted surface. It dries in a few minutes, which allows to paint immediately over the varnished parts.

$$
\begin{aligned}
& \text { 1-oz. bottle } \ldots \ldots \ldots \ldots \ldots \ldots . \text { Each Doz. Pint Quart } \\
& \text { 21-oz. bottle } \ldots \ldots \ldots \ldots \ldots \ldots .
\end{aligned}
$$

## VARNISHES



## WATER COLOR VARNISH

Retouching Varnish, Weber, for water colors ....1-oz, bottle, Doz.

## FIXATIF



SUNDRY LIQUIDS

| Adhesive Preparation |  | ${ }_{\text {Per }}^{\text {Pint }}$ | $\xrightarrow[\text { Per }]{\text { Quart }}$ |
| :---: | :---: | :---: | :---: |
| Transparency Liquid |  |  |  |
| Preservative Preparation |  |  |  |
| Gum Water ..... |  |  |  |

## FRENCH OILS, VARNISHES AND MEDIUMS

## Weber Canvas Textures

Weber Artist Canvases are scientifically prepared, only the highest quality raw materials being used in their preparation.

All qualifications which are necessary to make an artist canvas are given consideration, thereby assuring most permanent and durable results to a finished painting. Only the highest quality size and purest quality oil and paint are used in the priming of our canvases. During the preparation of our canvases, the stretch is taken out and they are specially prepared in order that gases, moisture and impure air cannot attack a finished painting from the back. Likewise, contraction and expansion are reduced to a minimum.

Weber Artist Canvases remain very pliable and flexible indefinitely and will not crack or peel. We have given very close study to the preparation of artist canvases for over fifty years and believe today to have embodied in our canvases all qualities required to give absolute durability and permanency.

## WEBER ARTIST CANVAS

Finely Prepared For Oil Painting FINEST QUALITY, IN ROLLS OF SIX YARDS

Best English Linen
No. 1 Single Prime
Per Yd. Per Roll


No. 2 Double Prime Smooth
No. 3 Roman Linen
No. 4 Best Twilled Linen No. 5 Absorbent Linen

Per Yd. Per Roll 30 inches wide


No, 114 Belgian Portrait Linen Per Yd. Per Roll 42 inches wide
No. 115-D Belgian Rough Portrait Linen

Per Yd. Per Roll

47 inches wide
NOTE-All widths can be especially furnished in any length greater than 6 yards at proportionately higher prices.
FINEST QUALITY PREPARED COTTON CANVAS
No. 8 Studio Sketching Canvas
40 inches wide . .... Per yard, Per roll of 6 yards ......
No. 11 Academy Roman Drill
40 inches wide ..... Per yard, Per roll of 6 yards
DECORATORS' CANVAS

## For Ceiling and Wall Decorations

Unsized, sized and Prepared Cottons, Linens and Burlaps, Samples and prices on request.
Sample Book of Artists' Canvases,
Artists, free
FOR PASTEL CANVASES, see page

## WEBER PREPARED LINEN CANVASES ON STRETCHERS

Single Prime, Double Prime, Smooth, Roman, Absorbent or Burlap and Twilled
Best English Linen. Nos. 1, 2, 3, 4, 5, 10, 114, 115, 117, 118, Made With Pfleger Strips.

|  |  | Each |  |  | Each |  |  | Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $6 \times 8$ | inches | ..... | $14 \times 20$ | inches | $\ldots \mathrm{Each}$ | $22 \times 30$ | inches | Each |
| $6 \times 10$ |  |  | $15 \times 18$ | " | ....... | $22 \times 36$ | , |  |
| $6 \times 11$ | " |  | $14 \times 24$ | * |  | $22 \times 38$ | * | . |
| $7 \times 12$ | " |  | $16 \times 20$ | " | ....... | $24 \times 32$ | 4 | ....... |
| $8 \times 10$ | " |  | $16 \times 22$ | " |  | $24 \times 34$ | * | . |
| $8 \times 14$ | " |  | $16 \times 24$ | . |  | $24 \times 36$ | " |  |
| $9 \times 12$ | " |  | $16 \times 26$ | " |  | $24 \times 42$ | " | . . . . . . |
| $10 \times 12$ | " |  | $16 \times 28$ | " |  | $25 \times 30$ | " |  |
| $10 \times 14$ | " | , | $17 \times 21$ | " |  | $26 \times 36$ | " |  |
| $10 \times 18$ | " | ....... | $18 \times 24$ | " |  | $27 \times 34$ | " |  |
| $12 \times 14$ | " |  | $18 \times 30$ | * |  | $28 \times 40$ | " |  |
| $12 \times 16$ | " |  | $18 \times 33$ | " |  | $29 \times 36$ | . |  |
| $12 \times 18$ | " | . ....... | $20 \times 24$ | 4 |  | $30 \times 40$ | $\cdots$ |  |
| $12 \times 20$ | " |  | $20 \times 26$ | " |  | $30 \times 42$ | * |  |
| $12 \times 22$ | " |  | $20 \times 30$ | " |  | $30 \times 46$ | * |  |
| $12 \times 24$ | " |  | $20 \times 36$ | " |  | $36 \times 42$ | * |  |
| $14 \times 17$ | " |  | $22 \times 27$ | " |  | $36 \times 42$ |  |  |

Prices for other Sizes and for Canvases on Hand-made Stretchers on Application

## WEBER COTTON CANVAS ON STRETCHERS



## PATENT STRETCHER PIECES


$1 \frac{3}{4}$ inches wide

These pieces are interchangeable, hence any lengths can be fitted together. All lengths from 6 to 36 inches $\qquad$ Per 100 pieces,

| ". | 37 | al | 48 |
| :--- | :--- | :--- | :--- |
| ". | 49 | - | 61 |

## SINGLE STRETCHER PIECES

$1 \frac{3}{4}$ inches wide
All lengths from 6 to 19 inches, including keys ............ Per piece,


## HAND-MADE STRETCHERS

 Of Best Seasoned WOOD. Carefully Made in Our Own Shops

OVAL and ROUND Stretchers,
per running foot, based on same size, square or oval.


## CANVAS STRETCHING PINCERS

The Improved "Sphinx" Stretching Pincers


On account of its entirely new construction, it has special advantages over any Pincers so far introduced. Its Double Leverage gives it a powerful grip, short motion and quick action and does not strain the wrist. Jaws, 2 inches.

No. 1 Sphinx .............................................. Each,


No. 2
No. 2 French style, bent ............................................................................
With straight Jaws, 2 inches wide.

## WEBER ACADEMY BOARDS

Smooth or Rough Surface

Each Per'Doz.
Each Per Doz.
$6 \times 9$ inches
$9 \times 12$
$10 \times 14 \quad "$
$12 \times 18$ inches
$18 \times 24$
$22 \times 28$
Plain wooden panels, beveled edges, white wood for out-door sketching, made to order.

\author{
WEBER OIL SKETCHING PAPER <br> \section*{Smooth or Rough, Stippled Surface} <br> 

## WEBER OIL SKETCHING BLOCKS

Twenty-four sheets of Oil Sketching Paper, pressed on heavy binders board and fastened on the edges to form a solid block, of which the upper sheet can be taken off by drawing a knife around the edges, thus leaving the remainder smooth and clean. Rough or smooth surface.
6x 9 inches
Each
Each
10×14 inches
$9 \times 12$. $\quad$.....................
$12 \times 18$

## WEBER CANVAS SKETCHING BLOCKS

Twelve Sheets No. 8 Canvas to the Block

| Sizes | $6 \times 9$ | $9 \times 12$ | $12 \times 18$ |
| :---: | :---: | :---: | :---: |

Each

## ARTIST CANVAS BOARDS

Canvas Mounted on Heavy Binders Board

## No. 8 Fine Tooth Canvas Size $18 \times 24$

No. 11 Roman Drill Canvas
Per sheet,
Prepared with actual Artist Canvas mounted on a heavy stock finest ply board. The true canvas facing on these boards is sized and primed with the same care and quality priming that enters into the manufacture of Artists' Canvas, thereby insuring the most permanent properties and working qualities peculiar to Artists' Canvas on stretchers. It is impossible for Weber Artist Canvas Board to peel or chalk its surface or absorb a detrimental quantity of oil from the applied oil paints as is usual when the painting surface is too absorbent. The back of Weber Artist Canvas Board is also thoroughly protected with a coating of paint, thereby permanently preserving the back of the finished oil painting against the attacks of its worse enemies, impure air, gases and moisture.

Weber Artist Canvas Board meets the demand for a better quality sketchboard, being very durable and withstanding the destructive elements of climate and moisture very satisfactorily.

Weber Artist Canvas Boards are made in two surface textures, in only one size, 18 inches by 24 inches. RUSSELL ARTIST CANVAS BOARDS

Prepared by F. Weber Co.


These Boards are strong Binder's Boards, covered with Canvas prepared for Oil Painting. They make very desirable boards for out-door sketching, as well as studio painting.

| Inches <br> $6 \times 9$ <br> 6x12 <br> $7 \times 10$ <br> $8 \times 12$ <br> $9 \times 12$ <br> $9 \times 18$. | Each | er Doz. | $\begin{aligned} & \text { Inches } \\ & 10 \times 12 \\ & 10 \times 14 . \\ & 10 \times 16 . \\ & 10 \times 18 . \\ & 10 \times 20 \\ & 12 \times 14 . \\ & 12 \times 18 . \\ & 12 \times 20 . \end{aligned}$ | Each | Per Doz. | Inches $12 \times 24$ $14 \times 18$ $14 \times 20$ $16 \times 20$ $16 \times 22$ $16 \times 24$ $18 \times 24$ $20 \times 24$ |  | Per Doz. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## PAPIER-MACHÉ PLAQUES

Prepared for Oil and Water-Color Painting
All Genuine Papier-Maché Plaques are stamped with our trade-mark, the "Sphinx."

## ROUND PAPIER-MACHE PLAQUES



# FINE WOODEN SKETCH BOXES FOR OIL COLORS 

Made in Our Own Shops Under Careful Supervision

"RAFFAEL" OIL COLOR BOXES

Made of hard wood, polished and finely finished. Strong brass hardware. Leather carrying handle. Space for oil colors, oils, varnishes and brushes. Fitted with palette and easel device and lid grooved to hold two wet sketches.
$10 \times 14$ inches
Each,
$12 \times 16$

## FITTED

These boxes can be supplied fitted with an assortment of selected Artists' Oil Colors (Weber manuiacture), Brushes, Oils, Varnishes, Palette Knife, Palette Cup, "Academy" Boards.
$10 \times 14$ inches, fitted
$12 \times 16$

SPHINX OIL COLOR BOXES


Beautifully made of solid mahogany, polished. Hardware strong and heavily nickle-plated. Corners securely locked. Tin tray for holding colors, brushes and bottles. Fitted with mahogany oiled palette. Lid is grooved to hold two wet sketches and serves as easel. One of the finest Artists' Sketch Boxes made.
10x14 inches
Each
$12 \times 16$ inches $\qquad$ Each,

## SPHINX THUMB BOXES

For Holding a Small Outfit of Colors, Brushes, Etc.


These Boxes are also Adaptable for Out-door Water Color Sketching.

## OIL COLOR OUTFITS

## "POCKET" OIL SKETCHING OUTFIT

The Outfit consists of Japanned Tin Box, containing 12- $\frac{1}{2} \times 2$-inch Tubes of Weber Artist Oil Colors, 3 Brushes, 1 Bottle Linseed Oil, 1 Bottle Turpentine.

Price, complete, each


Inside Measurement, $61 / 2 \times 81 / 4 \times 11 / 4$ inches

## "DILETTANTE" OHL COLOR OUTFIT

The Outfit consists of Polished Maplewood Box, with brass handle and hinges, Wood Palette, Tin Palette Cup, 11 tubes Weber selected Artists' Oil Colors, 1 double tube Weber Permalba, 1 bottle Turpentine, 1 bottle Pale Drying Oil, 2 flat Bristle Brushes, 2 genuine Fitch-hair Brushes, 1 Blender, Steel Palette Knife, Lead Pencil, Impression Paper, Tracing Paper, and 1 Academy Board.

Price, complete, each .......

## "BEGINNERS" " OIL COLOR OUTFIT

The Outfit consists of Polished Maplewood Box, with brass handle and hinges, containing Wood Palette, Tin Palette Cup, 8 selected Weber Artists' Oil Colors in tubes, 1 bottle Pale Drying Oil, 2 flat Bristle Brushes, 2 round Fitch-hair Brushes, 1 brass Crayon Holder, 2 pieces Oil Sketching Paper, 1 piece each of Impression and Tracing Paper.
Price, complete, each ........

# F.WEBERCO. P PT. LOUIS A D E L $\underset{\text { BALTIMORE }}{\text { PI A A A }}$ 

## "ACADEMY"

## OIL COLOR OUTFIT

The Outfit consists of Polished Maplewood Box, with brass handle and hinges, 13 double tubes Weber selected Oil Colors, 1 bottle each Pale Drying Oil, Rectified Spirits of Turpentine, Steel Palette Knife, Palette and Palette Cup, 1 Blender, 1 Sable and 2 Bristle Brushes, Academy Board, Tracing and Transfer Paper.

Price, complete, each


Size $131 / 4 \times 61 / 4 \times 2$ inches deep


Size $101 / 2 \times 61 / 2 \times 2$ inches deep

## "TOURIST" SKETCH BOX

The Outfit consists of Japanned Tin Sketch Box, Mahogany Palette, Tin Oil Cup, Steel Palette Knife, 12 tubes Weber carefully selected Oil Colors. 1 double tube Weber Permalba, 2 Fitch-hair Brushes, 2 Bristle Brushes, 1 Blender, bottle Turpentine, bottle Pale Drying Oil, Academy Board, 2 pieces Oil Sketching Paper, Tracing Paper, Impression Paper, 2 pieces White Crayons, Crayon Holder, 2 pieces Black Crayons, Paper Stumps, Black Lead Pencil, 2 pleces Charcoal.
Price, complete, each ..........

## WEBER JAPANNED TIN OLL COLOR BOXES

Note-Our Japanned Tin Oil Sketching Boxes are of superior workmanship, and the interior most practically arranged. Nos, 1, 1立, 13, $2 \frac{1}{2}$ and $2 \frac{3}{2}$ are arranged to have the Palette fit into the lid of the box, while the space between lid and box as well as the partition in the double-bottom boxes is arranged for
"STUDENT"

carrying wet sketches, enabling the artist to carry from six to twelve wet sketches.

No. 00 "Student,"
$11 \times 6 \times 1 \frac{1}{2}$ in., empty.

## Each.

No. 00/E "Student" -Fitted-Containing 12 Single Tubes Weber Artist Oil Colors, 4 Bristle Brushes, 3 Sable Brushes, Steel Palette Knife, Wooden Palette, Palette Cup, Charcoal, Crayon Holder, 1 botthe each Pale Drying Oil, Spirits of Turpentine ... Each,

## " REMBRANDT*"

No. 0 "Rembrandt," $6 \times 13 \times 2$ inches deep, with tray, empty ....... Each E $_{5}$
No. 0/F "Rembrandt" -Fitted-Containing 18 Single and 2 Double Tubes Weber Artist Oil Colors, 3 Superfine Bristle, 2 Russian Sable Brights, 2 Russian Sable Round Brushes, Linseed Oil, Turpentine, Poppy Oil, Picture Mastic Varnish, 1 Steet Palette Knife, 1 Tin Palette Cup, Mahogany Palette. Each,


WEBER JAPANNED TIN OIL COLOR BOXES (Continued)
"THE UNIVERSITY"
No. 1 THE UNIVERSITY$9 \times 13 \times 23$ inches, with extra tray for Brushes, etc., and inside lid to keep the colors in place, empty ...... Each,
No. 1/F University - Fitted Containing 22 Single and 2 Double Tubes Weber Artist Oil Colors, 4 Superfine Bristles, 3 Russian Sable Round, 3 Russian Sable Brights, 1 bottle each Linseed Oil, Turpentine, Sphinx Varnish, Steel Palette Knife, Mahogany Palette, Palette Cup, 2 sheets Academy Boards.


Price, each ............

"ART SCHOOL"


No. $1 \frac{1}{2}$ "Art School," $9 \times 13 \times 2 \mathrm{k}$ inches, with inside lid to keep colors in place, beveled lid. empty ............. Each,

No. 1d/F "Art School"-Fitted -Containing 18 Single and 2 Double Tubes. Weber Artist Oil Colors, 5 Superfine Bristles, 3 Russian Sable Round, 3 Russian Sable Brights, 1 bottle each Linseed Oil, Turpentine, Sphinx Varnish, Steel Palette Knife, Mahogany Palette, Palette Cup, 2 sheets Academy Boards.
Price, each

WEBER JAPANNED TIN OIL COLOR BOXES (Continued)
"PHILADELPHIA"


No. 13 "Philadelphia," $9 \times 13 \times 3$ inches deep, with Extra Tray for colors and inside flaps to cover entire contents of box, beveled lid, ..........................................
No. 13/F "Philadelphia"-Fitted-Containing 17 Single and 14 Double Tubes Weber Artist Oil Colors, 4 Superfine Bristle Brushes, 4 Brights Bristle Brushes, 3 Russian Sable Round, 3 Russian Sable Brights, 1 bottle each Turpentine, Linseed Oil, Sphinx Varnish, Palette Cup, Mahogany Palette, Steel Palette Knife, 2 sheets Academy Boards.
"COLLEGE"


No. $2 \frac{1}{2}$ "College," $10 \times 14 \times 33$ inches, double bottom, with partitions for carrying wet sketches, with inside lid to keep the colors in place, .... Each

No. 21/F "College"-Fitted-Containing 19 Single and 2 Double Tubes Weber Artist Oil Colors, 4 Superfine Bristle Brushes, 4 Brights Bristle Brushes, 3 Russian Sable Round, 3 Russian Sable Brights, 1 bottle each Turpentine, Sphinx Varnish, Linseed Oil, Palette Cup, Mahogany Palette, Steel Palette Krife, 2 sheets Academy Boards.

# WEBER JAPANNED TIN OIL COLOR BOXES (Continued) 



No. 23 "Artists," $10 \times 14 \times 33$ inches, double bottom, with partitions for carrying wet sketches, with inside lids to keep colors in place, and with additional tray for colors, empty ......................... Each,
No. 23/F "Artists"-Fitted-Containing 34 Single Tubes and 2 Double Tubes Weber Artist Oil Colors, 6 Superfine Bristle Brushes, 2 Brights Bristles, 6 Red Sable Round, 3 Brights Russian Sable, 1 bottle each Turpentine, Linseed Oil, Sphinx Varnish, Steel Palette Knife, Palette Cup, Mahogany Palette, 2 Academy Boards ............ Each.


WEBER JAPANNED TIN OIL COLOR BOXES (Continued)
"PROFESSIONAL"


No. 3 "Professional," $10 \times 14 \times 31$ inches, double bottom and tray, and inside lids to keep colors in place; extra fine quality, empty ...... Each,

No. 3/F "Professional,"-Fitted-Containing 30 Single and 4 Double Tubes Mober Artist Oil Colors, 4 Superfine Bristle Brushes, 8 Brights Bristle Brushes, 3 Russian Sable Round, 3 Red Sable Round, 3 Ruszian Sable Brights, 1 Badger Blender, 1 bottle each Turpentine, Lirseed Oil, Splinx Varnish, I Palette Cup, Mahogany Palette, 1 Steel Paletre Ḱnife, 1 Canvas Scraper, $Z$ sheets Academy Boards .... Each,


Japanned Tin Boxes for China Colors, see China Painting Materials.
Japanned Tin Boxes for Water Colors, see Materials for Water Color Painting.

# F.WEBERCO. <br> P H I L A D E L P H I A ST. LOUIS BALTIMORE 

## LAY FIGURES AND WOODEN MANIKINS



Manikin, 10 inches high, white wood, without stand


Iron Stands for the above separately, 6 " ${ }_{4}$ to 15 in
Hard Wood Manikin, 19 inches, with ball metal joints, with stand, male or female
Hard Wood Jointed Manikin, painted, 19 inches, with stand
Female Lay Figures, natural size, dressed in Tricot, with joints on all limbs, and stand to rest upon
Male Lay Figures, natural size, dressed in Tricot, with joints on all limbs, and stand to rest upon

## SMOCKS FOR ARTISTS

Weber Artists' Smocks are of exceptionally fine quality cotton material of substantial weight. Well made and with the sport turn-down collars, broad backs, open cuffs to be rolled back and open front, fastening with pearl buttons all the way down; three pockets.

Made in the following chest sizes: 38,40 and 42 inches; length 45 inches, in tan, sage green and bluc. (Special colors and designs to order) ....Each,

## 

ARTISTS' PALETTE AND PAINTING KNIVES
Best Make. Imprinted "Weber" or "F. W. Co."


## French Shape Painting Knives Very Flexible Blades

3 Painting Knife, Long Trowel Shape Blade .... Blade Each, Short " Broad Blade Long Narrow Blade

Pocket Folding Palette Knife
9 Wooden Handle, 21-inch Blade Each,

Painters' Palette Knives or Spatulus
Straight Blade
Rivited Handle
10 Length of Blade, inches, 4 Each

Canvas Steel Scrapers-Bent


No. 12
No.
12 Wooden Handle, Length of Blade, inches
$1 \frac{1}{3}$
2 Each

STEEL SCRAPERS AND ERASERS


No. 13
13 ERASING KNIFE AND SCRAPER combined.
Rlade, 2立 inches long, Wooden Handle
Each,


No. 14
14 STEEL DUST ERASER, Blade, 2 in., Wooden Handle ...... Each,


No, 15
15 STEEL SCRAPER, Wooden Handle.
Blade, $3 \frac{1}{6}$ inches long $\qquad$
$\qquad$ Each,


16 CURVED STEEL COLOR ERASER, Blade, $1 \frac{1}{2}$ inches, Wooden Handle . ....................................................... Each,


No. 18
18 STEEL COLOR ERASING PIN, Wooden Handle. Needle $1 \frac{1}{2}$ inches long Each,

## TIN PALETTE CUPS AND OIL CANS



#  

## BRUSH CLEANER



Brush Cleaner

## Japanned

2 in . high $\times 2 \frac{1}{2} \mathrm{in}$. diameter, with sieve and lid

## BRUSH CLEANING TRAYS-Plain Tin


$13 \frac{1}{2}$ inches long, $3 \frac{1}{2}$ inches wide and 3 inches deep
$\qquad$

## BRUSH CASES-Japanned Tin

With Rubber Bands for Holding the Brushes Secure

No.
2 Small size, oval, 10 inches long, for water color brushes
3 Large size, oval, 12 inches long, for oil color brushes
$\qquad$
REST OR MAHL-STICKS

No.

```
White Wood
                                    Each
36 to 42 in.
Rosewood Imitation, 2 brass joints
36 "
    48*
```


## FWEBERCO. $\quad$ P H I L A D E L $\underset{\text { BALTIMORE }}{P}$



## MAHOGANY ARM PALETTES

Well Balanced, Cross Veneered at Thumbhole
$14 \times 19 \quad 16 \times 24$
$18 \times 26$
Oiled Each,
Polished $\qquad$

## DECORATORS' ALUMINUM PALETTES

Face Enameled Dull White


## F.WEBERCO. <br> Ps. Hóvis <br> A <br> D E L PALHIA A

## STUDIO EASELS

No, 1 Pine Wood, closing, with Board and Pins, 72 inches high..

No. 3 Pine Wood, folding, with Board and ing, with Board and


No. 3 FOLDING


No. 5


No, 11

No.
5 Studio Easel, Ash Wood. Board and Pins, 66 in . high, shellaced. .
11 Studio Easel, Ash Wood, with Rack and Color Tray, 80 inches high, shellaced
12 "Academy" Easel, white wood, plain, 81 inches high, accommodating Canvases as high as 75 in ; in use in most Art Schools

Each


No. 12

## FWEBERCO $P$ H I L A D E L P H I A

"REMBRANDT" STUDIO EASELS
THE IDEAL EASELS FOR THE STUDIO
Patented


No. 16


No. 20

The Rembrandt Studio Easels are strongly constructed of well-seasoned hard wood, stained a neutral color and well varnished. They are very substantial and serviceable. Have adjustment for inclining and reclining, and easy working winding device for raising or lowering. Made in our own shops.

No.
16 Width of Easel or length of Tray, 21 inches. Height of centerbar from Tray," 50 inches. No drawers, triangular base. Price .........
17 Width of Easel or length of Tray, $25 \frac{1}{2}$ inches. Height of centerbar from Tray, $61 \frac{1}{2}$ inches. No drawers, square open base, on castors.
Price..
$\qquad$
18 Width of Easel or length of Tray, 29 inches. Height of centerbar from Tray, 68 inches. No drawers, square closed base, on castors. Price..........
20 Width of Easel or length of Tray, 29 inches. Height of centerbar from Tray, 68 inches. With a large drawer in the base and with one small drawer at each end of the Tray for Brushes. On castors.

Price..
24 French Style Rembrandt Studio Easel, with spiral steel screw adjustment for raising or lowering; inclining or reclining. Tray, 22 inches. Height of centerbar above Tray, 60 inches. Price. Packing and Crating of Rembrandt Easels will be charged for at cost.

## WEBER SKETCHING EASELS

Made in Our Own Shops



No. 32


No. 33 "Sphinx"


No. 34

No. 39


No. 36
Eacio
303 Legs, Ashwood Folding Easel, with Tray and Pins, shellaced .....
32 Light Ashwood Easel, Sliding Legs, with Tray and Steel Pins, shel-
33 "Sphinx." This Easel with sliding legs has been adopted and recommended by leading artists, and is unquestionably a very strong, light and perfect Sketching Easel. The great improvement of the Patent Extension Block enables the artist to adjust his canvas at any angle he wishes, and therefore the Easel takes also the place of a Studio Easel for small work. In adjusting the canvas to the Easel, always support the tray with one hand, push down the Extension Block with the other and then fasten the screw. Natural finish, shellaced.
343 Legs, Ashwood, Folding Easel, with Movable Tray, Price.........

# F.WEBERCO <br> P H I L L STOUIS <br> <br> BALTIMORE 

 <br> <br> BALTIMORE}

## WEBER SKETCHING EASELS (Continued)

No. 36. This Easel possesses the essential features most desired by the out-of-doors Sketcher. Takes any size canvas up to fifty-four (54) inches and has the advantage over others of enabling the artist to use it either in a standing or sitting position. All metal parts are non-corrosive and wood the lightest and strongest available.

No hard-working Clamps, Springs, Pins or Wing bolts, which pull out, but a simple little device, which anyone can operate. All that is necessary is to slip the canvas holder to the desired height, put on the Canvas, adjust top bar for inclining and reclining canvas and it clamps itself and will, if put to a test, sustain a weight of fifty (50) pounds. Rigid in strong winds.

When folded measures thirty-nine (39) inches and weighs only three and a half ( $3 \frac{1}{2}$ ) pounds; when extended measures six feet, two inches ( $6^{\prime} 2^{\prime \prime}$ ). No removable parts, hence nothing to be lost or mislaid.

Natural finish shellaced. Price..........



## WEBER SKETCHING UMBRELLAS



No. 000
No
0
SKETCHING Umbrella, steel grey color, cotton covering, steel frame, ribs 31 inches, without staff .............................
000 SKETCHING Umbrella, steel grey color, cotton covering, steel frame, ribs 31 inches long, tilting top, with staff, complete ..........

## PATENT UMBRELLA STAFFS



No. 1


No. 2
No. 1. "THE SPHINX." This Umbrella Staff, with malleable iron spike, fine brass screw joint and nickel-plated swivel attachment, is undoubtedly the best, the most complete and comparatively the cheapest one on the market. The holder, or the contrivance by which the Umbrella is fastened or held to the staff, is entirely independent of the latter, and this enables the artist to adjust or move the Umbrella in three different ways instead of one, as heretofore. The holder being independent, can be removed and fastened to a walking
cane or any other staff.

Price $\qquad$ Each,
No. 2. UMBRELLA STAFF, malleable iron spike, brass ferrule joint and holder, with BALL SOCKET, strong and convenient.

Price
Each,

## 

## Brushes for Oil-Color Painting

## WEBER ARTISTS' RED SABLE BRUSHES

FOR OIL PAINTING


SERIES No. 95, Round; No. 98, Flat and in Nickel-plated Ferrules, Polished Handles
For Illustrations of Flat Sable Brushes, see Russian Sables, No. 78, Page 67


Nos. 1 to 12, assorted ..............................................er gross,


EXTRA SIZES
SERIES No. 95, Round, and No. 98, Flat

[^5]
## BRUSHES FOR OIL-COLOR PAINTING (Continued)

## RED SABLE WRITERS OR RIGGERS



SERIES No. 102, Round, in Nickel-Plated Ferrules, Polished Handles Superfine Quality


## WEBER BRIGHT'S RED SABLE BRUSHES



SERIES No. 101, Short Hair, Flat, in Nickel-Plated Ferrules, Polished Handles



## BRUSHES FOR OIL-COLOR PAINTING (Continued)

## WEBER FLAT RED SABLE BRUSHES

SERIES No. 97b, Flat, in Tin, Extra Sizes, Polished Handles. Superior
Finest quality imported Red Sable hair alone used in the manufacture of these brushes. The hair is thickly set and the brushes, therefore, serve well as blenders.



SERIES No. 78, Round; No. 80, Flat, Nickel-Plated Ferrules, Polished Cedar Handles
For Illustrations of the Round Russian Sable Brushes, see Red Sable Brushes, No. 95, Page 65


Each Per Doz.


Each Per Doz.
8.......................
10....
11....
12.

Each Doz

For Extra Size, see page 68 BRUSHES FOR OIL-COLOR PAINTING (Continued)

## ARTISTS' "RUSSIAN SABLE" BRUSHES

SERIES No. 80b, Flat, in Nickel-Plated Ferrules
EXTRA SIZES


## WEBER SUPERFINE BRIGHT'S "RUSSIAN SABLE" BRUSHES



SERIES No. 82, Short Hair, Flat, in Nickel-Plated Ferrules, Polished Handles

| Size | Each | Pet Doz. | Size No. | Each | Per Doz. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  |  | , | Each | Per Doz. |
| 2. |  |  | 7. |  |  |
| 3. |  |  |  |  |  |
| 4. |  |  |  |  |  |

Nos. 1 to 9, assorted . ........................................... Per gross,

EXTRA SIZES


BRUSHES FOR OIL-COLOR PAINTING (Continued)
ROUND BADGER-HAIR BLENDERS


SERIES No. 125, Wire Bound, Natural Polished Handles


## BADGER-HAIR BLENDERS

Flat, Knotted, Set in Bone


## BRUSHES FOR OIL-COLOR PAINTING (Continued) WEBER SUPERFINE ARTISTS' BRISTLE BRUSHES

The hoghair in our "Tizian" and "Raffael" brushes is of the finest selected quality. These brushes are far superior to the ordinary lower-priced bristle brushes, and are an economy to the artist, in so far as they will outlast several of the ordinary type. Great care is taken to make all our brushes perfect in form and in arrangement of hair. Every artist is aware of the advantages of a brush that will not separate, at the end, that has just the proper spring, and that, in drying, will curve inwardly instead of outwardly. The bristles all have natural tips.


#  

BRUSHES FOR OIL-COLOR PAINTING (Continued)

WEBER SUPERFINE ARTISTS' BRISTLE BRUSHES

"TIZIAN" Flat Bright's Bristle Brushes, in Nickel-plated Seamless Ferrules, Polished Handles

| Size | Each Per Doz. | Size $\mathrm{No}$. | Each | Per Doz. |
| :---: | :---: | :---: | :---: | :---: |
| 1. |  | 7. |  |  |
| 2. |  | 8. |  |  |
| 3. |  | 9. |  |  |
| 4 |  | 10. |  |  |
| 5 |  | 11. |  |  |
| 6. |  | 12. |  |  |



## BRUSHES FOR OIL-COLOR PAINTING (Continued) <br> WEBER ARTISTS' BRISTLE BRUSHES



Dome shape bristle brushes, selected finest quality, fine natural points, in nickel-plated ferrules, polished handles.
 BRUSHES FOR OIL-COLOR PAINTING (Continued)

WEBER ARTISTS' BRISTLE BRUSHES


SERIES No. 134, Round; No. 157, Flat, in Tin Ferrules, Red Polished Handles Finest Bleached Bristles

| Size |  |  | Size |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | Each | Per Doz. | $\begin{array}{r} \mathrm{No} \\ 7 \end{array}$ | Each | Per Doz. |
| 2 |  |  | 8. |  |  |
| 3 |  |  | 9 |  |  |
| 4 |  |  | 10. |  |  |
| 5 |  |  | 11. |  |  |
| 6. |  |  | 12 |  |  |

Nos. 1 to 12, assorted Per gross.

EXTRA SIZES


SERIES No. 134, Round, and No. 157, Flat, in Tin Ferrules, Red Polished Handles


## BRUSHES FOR OIL-COLOR PAINTING (Continued)



EXTRA SIZES


#  BALTIMORE 

BRUSHES FOR OIL-COLOR PAINTING (Continued)

## WEBER SUPERFINE BRIGHT'S BRISTLE BRUSHES




EXTRA SIZES


BRUSHES FOR OIL-COLOR PAINTING (Continued)
EXTRA THIN BRIGHT'S BRISTLE BRUSHES


SERIES No. 196, Square Top, in Tin Ferrules, Black Polished Handles


WEBER LANDSEER BRISTLE BRUSHES


SERIES No. 189, Flat, Long and Thin, in Tin Ferrules, Whitewood Handles


## BRUSHES FOR OIL-COLOR PAINTING (Continued)

 FRENCH WHITE HANDLED BRISTLE BRUSHES

SERIES No. 295, Flat Artists', in Tin Ferrules, Plain Whitewood Handles SERIES No. 294, Round Artists', in Tin Ferrules, Plain Whitewood Handles


Each Per Doz.


...Per gross,

## EXTRA SIZES

Each Per Doz.
Size
No.

| 20 | 1 | inch |
| :--- | :--- | :--- |
| 22 | $1 \frac{1}{8}$ |  |
| 24 | $1 \frac{1}{4}$ | $"$ |

Each Per Doz.

Each Per Doz.

SERIES No. 289, Bright's Flat, Thin, in
Tin Ferrules, Plain White Handles.
Size No. Each Per Doz.
1.....
3...
$5 . \ldots .$.
$6 \ldots \ldots$
7.....
8.
10...
11.......

Nos. 1 to 12, assorted ….... Per gross, For Extra Large Sizes, see next page.


FRENCH BRIGHT'S BRISTLE BRUSHES
(Continued)
EXTRA SIZES

SERIES No. 289
Bright's Flat, Thin, in Tin Ferrules, Plain Whitewood Handles.



FAN BRUSHES For Painting in Foliage, Grasses, Hair, Etc.


Bristle, Size No

$$
\begin{aligned}
& \text { Price, each } 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
\end{aligned}
$$

Red Sable, Size No
Price, each
1
2
Price, per dozen

## 

BRUSHES FOR OIL-COLOR PAINTING (Continued)
WEBER FLAT BRISTLE VARNISH BRUSHES
In Tin Ferrules and Cedar Handles
SERIES
No. 52

## FLAT BRISTLE VARNISH BRUSHES

## Extra Quality, Chiseled




## SIBERIAN OX-HAIR VARNISH BRUSHES

Extra Fine Quality, Flat, in Tin Ferrules



SERIES No. 54-S-Square

```
M
```

SERIES No. 54-C-Chiseled
Each Per Doz.
F.WEBERCO.

## BRUSHES FOR OIL-COLOR PAINTING (Continued)

WEBER FLAT CAMEL-HAIR VARNISH BRUSHES


## FITCH FLOWING VARNISH BRUSHES

Square and Chiseled


## RUBBER SET FLAT VARNISH BRUSHES

SERIES
No. 58


SERIES No. 58-B-Bristle

```
Size
1 inch
2.
3 "
```

SERIES 58-C.H.-Camelshair
Size
Each Per Doz

$$
1 \text { inch }
$$

$$
\frac{1}{3}
$$

## BRUSHES FOR OIL-COLOR PAINTING (Continued)

## TAPESTRY PAINTING AND STENCILING BRUSHES

## BRISTLE POONAH BRUSHES

For Stenciling Patterns and Tinting Wax Flowers


SERIES No. 142, Round, in Tin, Yellow Polished Handles
Diameter, inches
Each
Dozen

WEBER TAPESTRY BRISTLE BRUSHES


No. 12


No. 9


No. 6


No. 3

SERIES No. 199, Chiseled and Slanting Points, on polished handles. Specially adapted for stenciling on fabrics, as the chisel point is necessary for sharp corners and fine lines.

```
Nos.
Inches
Each
Per dozen
```


## Water-Color Painting Materials

## WEBER WATER COLORS

Put up in Whole and Half Pans, Tubes, Octagon Glass Pots With Lid


CLASS "A"

| Half Pans $\ldots \ldots \ldots \ldots$ <br> Whole Pans $\ldots \ldots \ldots \ldots$ | Each Per Doz. |
| :--- | :--- | | Tubes, $\frac{1}{2} \times 2 \frac{1}{2}$ inches .... |
| :--- | Each Per Doz.

Antwerp Blue Azure Blue Blue Black Brilliant Yellow, Light
Brown Ochre
Brown Pink
Burnt Roman Ochre
Burnt Sienna
Burnt Umber
Charcoal Grey
Chinese White
Chrome Yellow, Lemon
Chrome Yellow
Chrome Yellow, Deep
Chrome Orange
Delft Blue
Emerald Green

Gamboge
Green Lake
Hooker's Green, No. 1, Light
Hooker's Green, No. 2, Deep Indian Red Italian Pink Ivory Black King's Yellow Lamp Black Light Red
Mauve
Naples Yellow
Neutral Tint
New Blue
Olive Green

Payne's Grey
Peach Black
Permalba
Permanent Blue
Prussian Blue
Prussian Green
Raw Sienna
Raw Umber
Red Lead
Roman Ochre
Sap Green
Terre Verte
Vandyke Brown
Venetian Red
Yellow Lake
Yellow Ochre

Color Card of 90 Original Washes, 50 Cents Each

## WATER-COLOR PAINTING MATERIALS (Continued)

# WEBER WATER COLORS 

## (Continued)

CLASS "B"


## CLASS "C"



CLASS "D"


## WATER-COLOR PAINTING MATERIALS (Continued)

## WEBER ARTIST WATER COLORS

In "STUDIO SIZE", Tubes, $3+1 \times 4$ Inches
Contain four times the quantity of the ordinary tubes. Put up for the convenience of large users of colors. The colors are very finely ground, of the finest quality, and can be used directly in the Air Brush without first straining.


Sizes of Tubes, $\frac{3}{4} \mathrm{in}$. $\times 4 \mathrm{in}$.

Antwerp Blue
Burnt Sienna Burnt Umber Chinese White Chrome Yellow Chrome Yellow, Deep Chrome Orange Hooker's Green, No. 1, Light

Alizarin Crimson Brown Madder Crimson Lake Emerald Green
Gamboge

Cadmium Yellow, Pale
Cadmium Yellow Cadmium Orange Cerulean Blue Cobalt Blue

CLASS A. Per Tube,
Hooker's Green, No. 2, Deep Indian Red Ivory Black Lamp Black Light Red Naples Yellow New Blue

CLASS B. Per Tube, Geranium Lake Harrison Red Indian Yellow Indigo Olive Green
CLASS C. Per Tube, Emeraude Green French Blue Lemon Yellow
Rose Madder
Oxide of Chromium, Transparent

Payne's Grey
Permalba
Prussian Blue
Raw Sienna
Raw Umber
Vandyke Brown
Yellow Lake
Yellow Ochre

Rose Carthame
Sap Green
Scarlet Lake
Transparent Green
Vermilion

Oxide of Chromium, Opaque
Sepia
Viridian

## RETAILERS' COLOR CASES

[^6]
## WEBER TEMPERA COLORS

## TEMPERA TECHNIQUE

Tempera Colors can be successfully applied to all surfaces intended for Water Color Painting. Very effective and permanent results are obtainable by painting on our specially prepared cotton or linen back Artists' Tempera Canvas. For decorative painting on walls, wood panels, etc., the surface to be used should receive a priming coat of a semi-absorbent size or of TEMPERA MEDIUM. Tempera should not be painted impasto.

WEBER Artist Tempera Colors, having incorporated in them the correct amount of Medium, are ready for use, as furnished in the tubes, water being used solely as a vehicle for thinning. Where deeper quality of tone is desired, the addition of Tempera Medium is necessary. WEBER Tempera Medium is a scientifically prepared emulsion, free from obnoxious odors, which will not foul or disintegrate. The colors will last indefinitely without becoming putrid.

WEBER Artist Tempera Colors are of purest and finest quality pigments and can be intermixed and used in connection with any first quality Temperas.

A painting, begun in Tempera, if given an application of "SPHINX" Retouch Varnish or WEBER French Retouch Varnish may be continued with Oil Paints. To then further overpaint with Tempera, an application of Tempera Medium is necessary to insure cohesion.
"SPHINX" Retouch Varnish dries immediately; will not bloom, is chemically inert, forming an impervious protection to the finished work. Finished Tempera Paintings when rubbed in well with WEBER Refined Poppy Oil or WEBER Refined Linseed Oil attain a very rich appearance. To obtain a mat finish, employ WEBER Mat Tempera Varnish.
"TIZIAN" Selected Hog's Hair Brushes, Artists' Red Sable or Russian Sable Brushes should be used for Tempera. Wash brushes after use with soap and water to insure continued softness of hair.

## Color Card of 45 Original Washes, 50 Cents Each



Illustration \% size

WEBER ARTIST TEMPERA COLORS
CLASS A
In Tubes, $\frac{3}{4} \times 4$ inches. Per Tube,

Burnt Sienna
Burnt Umber Chrome Yellow, Lemon Chrome Yellow, Light Chrome Yellow, Med.
Chrome Yellow, Orange Cremnitz White Emerald Green Flake White Indian Red Ivory Black Light Red Naples Yellow

New Blue
Permalba
Prussian Blue
Raw Sienna Raw Umber Terre Verte Vandyke Brown Venetian Red Yellow Ochre Zinnober Green Zinc Yellow Zinc White

CLASS B
In Tubes, $\frac{1}{2} \times 4$ inches. Per Tube,

Geranium Lake, Permanent
Mauve

Scarlet<br>Safflower Red<br>Vermilion

# WEBER ARTIST TEMPERA COLORS (Continued) 

CLASS C<br>In Tubes, $\frac{1}{2} \times 4$ inches. Per Tube,<br>English Vermilion French Ultramarine French Vermilion Lemon Yellow<br>Oxide of Chromium, Opaque<br>Strontian Yellow Viridian<br>\section*{CLASS D}<br>In Tubes, $\frac{1}{2} \times 4$ inches. Per Tube, Cadmium Yellow, Deep Carmine<br>Aureolin<br>Cadmium Yellow, Light<br>Cadmium Yellow, Med.<br>Alizarin Madder Cobalt Blue Chinese Vermilion Emeraude Green<br>Cadmium Yellow, Orange Cerulean Blue<br>Cadmium Red<br>Cobalt Violet, Permanent

## CLASS E

In half-pound Tubes, $1 \times 6$ inches. Per Tube,

Cremnitz White Flake White

Zinc White

## 'SPHINX" SHOW CARD COLORS



2-ounce Bottle
"Sphinx" Show Card Colors are noted for their quality. They are prepared ready for use and are freely flowing, leaving no brush stroke showing, drying with a brilliant satiny mat finish; being opaque, they can be successfully applied one over the other, without disturbing the underlying color, similar to Tempera. These colors are frequently used in Schools as School Tempera colors. To dilute use clear water.

Made in the following colors: Black, White, Light Red. Dark Red, Magenta, Turquoise Blue, Ultramarine Blue, Light Blue, Lavender, Emerald Green, Light Green, Dark Green, Yellow, Orange, Brown, Glossy Black.

## Price

Each Per Doz,
2-ounce Jars
Each
$\frac{1}{2}$-pint Jars
Pint Jars.
Quart Jars
Gold and Silver, in 2-ounce Jars, each
Color Card of "Sphinx" Show Card Colors, on request to schools, dealers and the profession generally.

## REPRODUCTION WHITE

For Photo-Engravers and Retouchers and Illustrators


## REPRODUCTION WHITE

## The Ideal White for the Photo-Engraver

Reproduction White photographs true.
Is a permanent white, remaining so with age and under all conditions, does not change under the light.

Mixes successfully with other pigments, rendering half-tones correctly in reproduction.

Free from lead, and is opaque.
Being free from lead, it is especially adapted for use in air brush, does not clog the brush as do the heavy lead whites, also is free from grit.

Can readily be softened down, erased and diluted with water.
Reproduction White should be used whenever an original drawing, painting or photograph is to be kept for future use, as it will remain white, while most other opaque whites discolor with age, or when under unfavorable conditions. Illustrators will find this especially valuable for their work.


Permalba in water color is frequently used by PhotoEngravers as a reproduction white, on account of its wellknown inertness.

## WEBER PHOTO-RETOUCH TINTS

With characteristic gloss, made in 6 tints, viz.:
No. 1, Reddish; No. 2, Brownish; No. 3. Blackish; No. 5, Cologne Earth; No. 6, Sepia; No. 7, Albumen White.

In Tubes, $\frac{1}{2} \times 2 \frac{1}{2}$ inches at
per Tube. Sample Wash Card sent on request.

## OPAQUES

## For Negative Retouching

Gihon's Celebrated Opaque, in cakes, for Negative Retouching. Per cake
Weber Liquid Opaque, in 1-ounce bottles ....... Each,

## F. WEBER CO.'S

"STUDENTS'" STANDARD WATER COLORS
For Schools and Colleges. In Half Pans, or in Tubes, $\frac{1}{2} \times 3$ inches


Alizarin Crimson
Burnt Sienna Burnt Umber Chrome Yellow Chrome Deep Charcoal Grey Chinese White Crimson Lake Carmine (Imit.)

Cobalt Blue (Imit.)
Emerald Green Gamboge
Geranium Lake
Hooker's Green
Indian Red
Indigo
Ivory Black
'Light Red

Price per Tube, $\frac{1}{2} \times 3$ inches $\frac{1}{2} \mathrm{Pan}$

Lamp Black Neutral Tint New Blue New Green Orange Prussian Blue Payne's Grey Raw Sienna Raw Umber Rose Madder (Imit.) Rose Carthame Sap Green


Fitted With 12 "Students" Standard Water Colors, in $\frac{1}{2} \times 3$-inch Tubes and Two Brushes. Price, per Box

## SEPARATE CAKES

Separate cakes to refill school boxes, as shown and described on page 89. Yellow, Carmine, Ultramarine Blue, Black, Green, Charcoal Grey and White.


## STANDARD WATER COLORS FOR SCHOOL USE WEBER LONG SHAPE TIN BOXES

Enameled inside and outside, size $8 \times 2 \times \frac{1}{2}$ inches, with enameled tray to hold colors in tin pans enameled inside to prevent rusting. Fitted with either long cakes or half pans of Water Colors.

These boxes are very popular with elementary schools. The quality of the colors is high. They are extraordinarily brilliant and permanent.


No. $2 / 4$


No. $4 / 4$
4/4 With 4 half pans and one Brush


No. $4 / 8$
Each
No. Containing 8 half pans of selected school colors and one Camel's Hair Brush. The favorite box among schools

Separate Colors in Enameled Tin Half Pans
Carmine, Orange, Yellow, Green, Ultramarine, Purple, Brown, Black, White. Per $\frac{1}{2}$ pan ........ Per dozen ........
Special Prices for Quantities made to Schools and Colleges

## SCHOOL WATER CUPS



No. 1 Enameled

No.


No. 3 Sanitary Gilt
Each Per Dpz.
1 Made of Tin, white enameled inside, and green outside, size $3 \frac{7}{4} \times 2 \frac{2}{6} \times 1 \frac{1}{8}$ inches
2 Agate School Water Cups, $3 \frac{1}{3} \times 2 \frac{1}{3} \times 1 \frac{1}{2}$ inches .................
3 "Sanitary Gilt" Water Cups, $3 \frac{1}{2} \times 2 \frac{1}{2} \times 1 \frac{1}{8}$, with 2 lips

## SCHOOL WATER COLOR PALETTE



Made of Tin, white enameled, with 4 wells and 4 slants. This is an excellent School Palette for mixing colors. Size $2 \frac{1}{2} \times 6$ inches.

Price............Each, Per Dozen,
Special Prices for Quantities made to Schools and Colleges

## LIQUID PHOTOGRAPH COLORS

## For Coloring Photographs, Autotypes, Engravings, Etc.



Box with ${ }_{\text {it }}^{6}$ half-ounce bottles Liquid Colors
$\begin{array}{llrll}\text { ". } & \text { ". } & 9 & \text { ". } & \text { ". } \\ \text { ". } & 12 & \text {." } & \text { " } & \text { " }\end{array}$

## LIQUID PHOTOGRAPH COLORS

## In Square Half-Ounce Bottles

Black, Blue, Brown, Green, Light Green, Magenta, Orange, Rose, Scarlet,
Sepia, Violet, Yellow ...... Per bottle, Per dozen,

## WATER COLOR BOXES FOR THE YOUNG ARTIST

## THE "REMBRANDT"


THE "MURILLO"


Small "Murillo"


Large "Murillo"

Small "Murillo," in japanned Tin Box, with 12 pans and 2 tubes moist colors and brushes
Large "Murillo," in japanned Tin Box, with 16 pans of water colors, tubes of Chinese White and Sepia and Camel-hair brushes


> JAPANNED TIN
> POCKET SKETCH BOXES

Containing Artists' Water Colors For the Artist, when Outdoors, Sketching.

With 12 Moist Colors
$\begin{array}{llll}\text { ". } & 16 & \text { " } & \text { ". } \\ & 24 & \text { " } & \end{array}$


## WATER-COLOR BOXES

Fitted with good quality Water Colors in china half pans. Palette Lid for mixing. Spaces will accommodate standard half pans of any make. Especially adapted for use in High Schools and Colleges.


No.
47 K-10 Containing 10 hali pans of Water Colors in one row and brushes,
47 K-12 Containing 12 half pans of Water Colors in one row and brushes,


No.
47 K-16 Containing 16 half pans and brushes
Each
47 K-22 Containing 22 half pans and brushes

## 

## WATER-COLOR BOXES

In Japanned Tin Boxes, ideally adapted for work in the studio. Will take standard half pans of any make. Strongly constructed. Fitted with half pans of good water color, brushes, china mixing slant and water cup.


60 W-14 With 14 half pans of Water Color and brushes


60 W-20 With 20 half pans of Water Color and brushes


60 W-27 With 27 half pans of Water Color and brushes


## ARTISTS' EMPTY JAPANNED TIN BOXES

FOR MOIST WATER COLORS in Pans and Half Pans, With Palette Flap Attached. ARTISTS' QUALITY


STUDENTS' EMPTY JAPANNED TIN BOXES
FOR WATER COLORS, in Pans and Half Pans. Made of Best Tin, Japanned Black Outside, White Enamel Inside

STUDENTS'


No. 5860

For Half Pans
With Palette flap inside and slants for mixing colors.
5860/12 For 12 Half Pans ....
5860/16
5860/20 " 20 " .. .... 5860/24 ". 24 ." .. ....

For Whole Pans
With Palette flap inside and slants for mixing colors. $5861 / 8$ For 8 Whole Pans .. $5861 / 12$ ". 12 $5861 / 16$ " 16 5861/20 ". 20

STUDENTS' EMPTY JAPANNED TIN BOXES
For Water Colors, in Tubes $\frac{1}{2} \times 2 \frac{1}{4}$ inches
Lid Has Slants for Mixing Colors
Each
$5862 / 8$ For 8 tubes, 21 in. long $\begin{array}{llllll}5862 / 10 & \text { " } & 10 & \text { ". } & 2 \frac{1}{2} & \text { ". } \\ 5862 / 12 & \text { " } & 12 & \text { " } & 2 \frac{1}{2} & \text { " }\end{array}$

JAPANNED TIN WATER BOTTLES
No. $5864 / 1$ Round Tin Bottle, $3 \frac{1}{2}$ inches, with screw top, with tin cups, forming separated, twopalette water cups $\qquad$
$5864 / 2$ Oval Tin Bottle, $3 \frac{1}{2}$ inches, with screw top, with tin cups, forming separated, twopalette water cups

5863/12 For 12 tubes, 3 inches long .....................

5k inches, with screw
5864/3 Oval Tin Bottle, $5 \frac{3}{2}$ inches, with screw
 top, with tin cups, palette water cups


No. 5864-4
5865
Japanned Tin Water Color Sketch Palette with 20 recesses, to take color pressed out of tubes.

Each

## JAPANNED TIN WATER BOTTLES (Continued) <br> No.

5864/4 Oval Japanned Tin Combination Water Bottle and Color Box. Excellent for outdoor Sketching


No. 5865

## CHINAWARE FOR ARTISTS CABINET NEST SAUCERS



6031
6032
6033

## COLOR SLANTS


No. 6000-5
Each Per Doz.

6000/3 6000/4 6000/5 6000/6 6000/8 6000/10 6000/12

China Color Slant,
3 Slopes,
$2 \frac{1}{2} \times 4$ inches $\qquad$
.. $3 \times 8$
$\begin{array}{lll}\text { "4 } & 3 \times 8 & \text {.. } \\ " & 3 \frac{1}{3} \times 8 & \text { ". } \\ \text { " } & 3 \frac{1}{3} \times 8 & \end{array}$
4 $6 \frac{1}{8} \times 7$ 童
$6 \frac{1}{6} \times 7 \frac{3}{3}$
$6 \times 7 \frac{1}{3}$
China Color Slant, with 5 slopes, extra deep


No. 6015

6015 China Centre Color Slant, 5 Divisions, 2 k $\times 6$ inches. Each, Per Doz.,

## WATER-COLOR PAINTING MATERIALS (Continued)

## CHINAWARE FOR ARTISTS (Continued)

INK AND COLOR SLABS


No. 6018
No.
6018
6019


Each Per Doz. China Ink and Color Slab, ${\underset{5}{3}}_{3}$ Wells and ${\underset{5}{3}}_{3}$ Slopes, $\frac{21}{4 \frac{1}{2} \times 4}$ in


No. 6042
No .
China Ink Slab, with Cover, $17 \times 4 \frac{1}{2}$ inches
$2 \frac{1}{4} \times 5 \frac{1}{4}$

## SLATE INK SAUCER



No.
6050 Slate Ink Saucer, wth Glass Cover, $3 \frac{1}{2} \times 3 \frac{1}{2}$ inches

WATER-COLOR PAINTING MATERIALS (Continued)

## ARCHITECT'S BASIN



No. 6045
No.
6045 Architect's China Color Basin, 7 inches diameter, with 8 slopes and centre cup

## BRUSH REST



No. 6055
No.
China Brush Rest, $5 \frac{1}{2}$ inches

WATER GLASSES


No. 6060-62


No. 6064

No.
6060
6061
6062
6064

Water Glass with two lips, $2 \frac{1}{2}$ inches diameter
Each Per Doz
" " " " " 3 " "
" "
$1 \frac{1}{4}$ inches high fine cut for color boxes, $2 \frac{1}{2}$ inches diameter,

## WATER-COLOR PAINTING MATERIALS (Continued)



WATER-COLOR PAINTING MATERIALS (Continued)
"SPHINX" METALLIC WATER COLORS


In Round China Cups, $13 / 4$ inches Diameter
Ten different Colors: Pale Gold, Rich Gold, Orange, Silver, Copper, Antique Green, Maroon, Crimson, Brilliant Peacock Blue, Brilliant
Green
Per box of 10 , single or assorted Colors


WEBER
WATER COLOR LIQUIDS AND WHITES

Carmine, -ounce
Gold Ink, large 1 -ounce small, -ounce
White Ink, large, 1 -ounce small, $\frac{1}{\text {-ounce }}$


Oxgall, 1-ounce
Silver Ink, large, 1 -ounce
small, $\frac{1}{2}$-ounce
Gum Water, 21-ounce ..........

## WEBER RETOUCHING VARNISH for WATER COLOR

A Very Fine, High-grade Varnish for Application Over Water-Color Paintings In 1 -ounce bottles ...... Per bottle,

Per Doz.
SOEHNEE FRERES RETOUCHING VARNISH, No. 2, for Water-Color Painting ...... Per 1-ounce bottle, Per Doz.

## WATER-COLOR PAINTING MATERIALS (Continued)

## LIQUID LAMP BLACK

Pure Carbon Black of the Highest Grade For the Air Brush and for Wash Drawings
Absolutely Jet Black, always ready for use. Can be reduced with water to produce any shade, and thus enables the artist to mix and keep in advance the different shades used in his work.

Price, per $2 \frac{1}{2}$-ounce bottle,
Moist, in Tubes, $\frac{1}{3} \times 2 \frac{1}{2}$ inches

Per pint, Each.

Per Quart,
1-ounce Jar,
. Each,

WATER COLOR WHITES
Each Per Doz.
Weber Chinese White, in 1 -ounce jars
in $2 \frac{1}{1} \times \frac{1}{2}$-inch tubes
in $4 \times \frac{2}{3}$-inch tubes
Permalba, in 1-ounce jars
$2 \frac{1}{3} \mathrm{x}^{\frac{1}{2}}$-inch tubes

- $4 \times 1$-inch tubes..

BRONZES AND LIQUIDS

"Aurum" Gold Paint. The best substitute for Gold Leaf. Outfit consists of 1 bottle finest Gold Bronze, 1 bottle Liquid, Brush and Cup for mixing
"Aurum" Liquid only, in $2 \frac{1}{2}$-ounce bottle
per pint
quart
"SPHJNX" GOLD PAINT
"Sphinx" Gold Paint, Outfit consists of 1 bottle finest French Bronze, 1 bottle Liquid, and Brush and Cup for mixing
"Sphinx" Silver Paint, put up like the above
Copper Paint, put up like the above
"Sphinx" Liquid only, in 21-ounce bottle
per quart

WATER-COLOR PAINTING MATERIALS (Continued)

## CHINESE OR INDIA INK IN STICKS



5740
Chinese, Large Figured, $3 \frac{1}{2} \times \frac{7}{6} \times \frac{1}{8}$ inches
5742 .
Super., Small, $2 \frac{8}{6} \times \frac{1}{2} \times \frac{1}{2}$ inches

5751 " Lion Head, Oval, Fine Quality, 40 to pound ...
" " " Smal1, Round, Gilt, 64 to pound ......
Broken India Ink, assorted, per pound,


## BLACK AND COLORED DRAGON INK IN STICKS

5765 Dragon Stick Ink, Black
. Reddish Brown (Burnt Sienna)

* Yellow
" Red (Vermilion)
" Blue
* Green



## WEBER WATERPROOF DRAWING INK

A Pure Carbon Ink, Jet Black, Freely Flowing, Non-corrosive and Absolutely Waterproof. Dries With a Soft Satiny Finish, Which is a Distinct Benefit to the Draftman's Eyes. Black and Twelve Colors


Each $\begin{array}{lll}\text { No. } \\ 5700 & \frac{1}{2}-\text { oz. bottles } . . . . \\ & 1 & \text { " } \\ & \text { quill stoppers .... }\end{array}$
 Quart bottles
$\qquad$
$\qquad$
Waterproof Drawing Ink also in the following Colors: Blue, Brown, Green, Purple, Red or Carmine, Scarlet, Yellow, Vermilion, Indigo, Brick Red, Orange, White, and Black General or Soluble. Color Card, of Weber Waterproof Drawing Inks, sent on request.

## INK BOTTLE HOLDERS AND TRAYS



No. 5720
No. 5721. Combination Ink Bot tle Holder and Paper Weight, with patented arrangement for filling the ruling pen. Each,


No. 5721

No. 5722-A. Hard Wood Tray, to hold 3 bottles $\qquad$
No. 5722-B.
F.WEBERCO. P ST. LOUIS A D E L $\underset{\text { BALTIMORE }}{P}$

## ADHESIVES

## FOR MOUNTING PHOTOGRAPHS, MAPS, AND OFFICE USE



No. 5718-303

## ADHESIVE PASTE IN GLASS JARS

Royal Paste is especially adapted for mounting drawings, maps and pictures. It is also excellent for sticking paper to the drawing board, or any work requiring a quick acting and powerful adhesive.
No. 5864. In glass jars, with screw cap tops.


Each

## WEBER SCHOOL PASTE

No. 5869. An ideal pure white, soft adhesive for School Room and Office Use, in glass jars, with metal screw caps.

| $\begin{aligned} & \text { 2-ounce siz } \\ & 4 \end{aligned}$ | Each, | Dozen, |
| :---: | :---: | :---: |
| -pint size | " | " |

## WEBER'S PASTE IN TUBES

Small size
Large
Each,
Dozen,

No. 5718-303. Bourgeois "Encre de Chine." India Ink in
$\frac{3}{3}$-ounce bottle
Each Per Doz
$\qquad$


No. 5715

## HIGGINS' DRAWING

 INKS AND PASTES

No. 5866


No. 5865
No.
Each Per Doz.
5715 HIGGINS' Waterproof Drawing Ink, Black or Colored. In 3-ounce bottles 5715A. HIGGINS' Waterproof Drawing Ink, Black or Colored. $\frac{\frac{1}{2}}{2}$ pint . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Per bottle, 5715B. HIGGINS' Waterproof Drawing Ink, Black or Colored.
1 pint . .......................................... Per bottle, 5715C. HIGGINS' Waterproof Drawing Ink, Black or Colored,

Made in the following Colors: Black General, Black Waterproof, Blue, Brick Red, Brown, Carmine, Yellow, White, Green, Indigo, Orange, Scarlet, Vermilion, Violet.
2-oz, Bot. 1/2-pint Bet.
No. Each,
5716
HIGGINS' Eternal Ink ...............................
Engrossing Ink $\qquad$

## HIGGINS' ADHESIVES

| No. |  | 3-oz. | 6-02. | 14-0z | 7/2-gal. | 1-gal. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5865 | Drawing-Board Mucilage, in Glass Jars . ...................... Each, |  |  |  |  |  |
| 5866 Photo-Mounter, in Glass Jars, " |  |  |  |  |  |  |
| $5866 \frac{1}{2}$ | Higgins' Office Paste, in Glass Jars, Screw Top, with Brash. 4-ounce . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Each, 8 |  |  |  |  |  |
| No. |  |  |  | 2-0z. | 4-oz. | Qts. |
| $5867$ | Taurine Mucilage, in Bottles |  | Ea |  |  |  |

## FWEBERCO. $\underset{S T}{P}$ H I LOUIS A D E L $\underset{\text { BALTIMORE }}{P}$

## Brushes for Water-Color Painting

## EXTRA FINE "FIELDING" RED SABLE BRUSHES

Finest selected imported hair. The very best brush for Artist, Designer, Illustrator and Photo Retoucher, Round in Albata ferrules, polished walnut handles.

Round, in Albata Fercules, Polished Walnut Handles, Stamped in Gold

## 



## 





[^7]BRUSHES FOR WATER-COLOR PAINTING (Continued) WEBER ARTISTS' RED SABLE BRUSHES SERIES No. 93. Superfine Quality, Round, in Albata Ferrules


SERIES No. 93. Red Sable, in Albata, Black Polished Handles Nos.
Each, Dozen

POCKET RED SABLE BRUSHES
SERIES No, 93 PK. In Nickel Ferrules, Reversible. For Water-Color Painting
(The Brash protected.)

Each,
| Large size

BRUSHES FOR WATER-COLOR PAINTING (Continued)

## WEBER ARTISTS' FITCH BRUSHES



SERIES No. 77. In Albata, for Water-Color Painting. Polished Handles. A Very Desirable Brush Where a Substitute for Red Sable Brush is Required


WEBER ARTISTS' SUPERFINE CAMEL-HAIR BRUSHES


SERIES No. 12. For Water-Color Painting. Polished Handles, Tin Ferrules

| No. | Each. | Per Doz. | Per Gross | No. | Each. | Per Doz. |  | Per Gross |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\frac{1}{2}$ | $\checkmark$ |  |  | $4 .$ |  |  |  |  |
|  |  |  |  | $\checkmark 6$. |  |  |  |  |
| Nos | orted |  |  |  |  | Per gro |  |  |

BRUSHES FOR WATER-COLOR PAINTING (Continued)

## CAMEL-HAIR BRUSHES-Fine Quality

For School Use
In Tin Ferrules. Same Sizes as SERIES No. 12


SERIES No. 10. For Water-Color Painting. Polished Handles
Nos. ................................. 1 2 4
Per dozen
Per gross
Nos. 1 to 6, assorted, in boxes Per gross,

## SCHOOL CAMEL-HAIR WATER-COLOR BRUSHES



SERIES No. 11. In Tin Ferrules and Black Polished Wooden Handles
Nos. .............................. $5 \quad 6 \quad 7 \quad 8 \quad 9$
Per dozen
Per gross

JAPANESE SCHOOL WATER-COLOR BRUSHES


Each Per Doz. Per 100
White, thin, small size White, thick, large size ....................................

#  



The small bamboo ferrule of the "adjustable tip" brushes may be removed from the handle and the hair lengthened or shortened to the desired size. However, these brushes come in good average length, and it is not advised that you change the length, unless you have a steady hand, for the construction is necesarily delicate.
 ST. LOUIS BALTIMORE

BRUSHES FOR WATER-COLOR PAINTING (Continued) CAMEL-HAIR PENCILS-in Quills


These Illustrations Represent Series No. 90 Red Sable and No. 9 Camel-Hair Series No.
1 Ordinary, yellow bound, small sizes
Each Per Doz
Nos, 1 to 8 , assorted medium and large sizes ...............
6 Fine quality, assorted ................................er gross, medium sizes .................... large sizes ....................
Nos. 1 to 8, assorted ............................. Per gross,
9 Superfine, red silk and gold thread binding (see illus, above).
Sizes ........... $1 \quad 2 \quad 3 \quad 4 \quad 4 \quad 6$
Each ............
Per dozen
RED SABLE PENCILS-in Quills SERIES No. 90. For Miniature Painting


## CAMEL-HAIR SWAN QUILL PENCILS



SERIES No. 14. For Large Washes. Best Quality
Sizes
0
1
2 3
Each
Dozen


## BRUSHES FOR WATER-COLOR PAINTING (Continued)

## WEBER CAMEL-HAIR SKY BRUSHES



SERIES No. 50b. Superfine Quality, Flat Pointed, Nickel-Plated Ferrules. Best Brush for Washing


## WEBER FLAT CAMEL-HAIR BRUSHES



SERIES No. 50. In Tin, Flat, for Washes. Polished Handles

| Size | Each | Per Doz. | Size | Each |
| :---: | :---: | :---: | :---: | :---: |
| $\frac{1}{4}$ inch |  |  | 5 inch |  |
| B\% |  |  | $\frac{3}{4}$ " |  |
| $\frac{1}{2}$ " |  |  |  |  |

## OX-HAIR TINTING OR WASH BRUSHES

For Illustration, see Cut of Camel-Hair No. 50 above.
SERIES No. 52. Extra Thin, in Tin Ferrules. Polished Handles
Size
咅 줗 Each Dozen

## FWEBERCO $P$ H I L A D E L P H I A ST. LOUIS <br> BALTIMORE

## BRUSHES FOR WATER-COLOR PAINTING (Continued)

 WEBER SUPERFINE CAMEL-HAIR BRUSHES

SERIES No. 16. Round, Large, in Tin, for Skies, Washing, etc. Yellow Polished Handles


SERIES No. 117. Round, Double, Small Sizes. One Brush at Each End of Handle


SERIES No. 17. Round, Double, Large Sizes. One Brush at Each End of Handle


WINSOR \& NEWTON RED SABLE BRUSHES

| $\begin{aligned} & \text { SERIES N } \\ & \text { Size } \\ & 00 \\ & 0 \\ & 0 \\ & 1 \\ & 1 \\ & 2 \\ & 3 \end{aligned} \ldots .$ |
| :---: |
|  |  |
|  |  |

SERIES No. 121
Size Each Per Dok.
0



0
F.WEBERCO. P HTA LI A D E L P H I I A ST.LOUIS BALTIMORE

# Brushes for Show Card Writing and Painting 

## WEBER "FLAT STROKE" SHOW CARD BRUSHES



Superfine Quality RED SABLE or OX-HAIR, in Nickel-Plated Ferrules, 7-inch Black Polished Handles

SERIES No. 300.

| in wide |
| :---: |

SERIES No. 301.


## RED SABLE

Each Per Doz.
$\frac{3}{8}$ in. wide
Each Per Doz.

OX HAIR
Each Per Dor

## 

## BRUSHES FOR SHOW CARD WRITING (Continued)

## WEBER "SCRIPT CARD WRITING" BRUSHES

Note: These brushes contain nothing but pure Red Sable of the best quality, and are, therefore, not to be confused with similar brushes offered at much lower prices. On account of their high quality they will outlast most other grades and give better results.


Illustration Actual Size of Brushes
Superfine Quality RED SABLE, in Nickel-Plated Ferrules, 7-inch Black Polished Handles

For Fine Scrolls, Outlining, all Script Letters, for any style Stroke Work, these Brushes should be employed.

SERIES No. 302.
$\qquad$


## WEBER "SHOW CARD LETTERING" BRUSHES



Illustration Actual Size of Brushes

Superfine Quality of RED SABLE, in Nickel-Plated Ferrules, 7 -inch Black Polished Handles. Round Ferrules, Square Ends

The Brush will hold its shape in one-stroke lettering for Show-Card Woik.
SERIES No. 303.


## WEBER "SHOW CARD LETTERING" BRUSHES

(Continued)


Illustration Actual Size of Brushes

Large Sizes

SERIES No. 303.

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| $16 .$ |  |  |  |  |  |
|  |  |  |  |  |  |

## BRUSHES FOR FRESCO, SIGN, SHOW CARD AND CARRIAGE PAINTING (Continued)

CAMEL-HAIR WRITERS AND STRIPERS IN QUILLS


## EXTRA FINE OX-HAIR WRITERS

SERIES No. 104. In Quills, Best Quality. $1,1 \frac{1}{8}$ and $1 \frac{1}{4}$ Inches Long


BRUSHES FOR FRESCO, SIGN, SHOW CARD AND CARRIAGE PAINTING (Continued)

## EXTRA FINE OX-HAIR STRIPERS

SERIES No. 106. In Quills, Best Quality. 2 Inches Long


## EXTRA FINE OX-HAIR WRITERS

SERIES No. 107. Polished Handles. Hair 1 Inch to $1 \frac{1}{4}$ Inches Long


Nos. 1 to 6, assorted
Per gross,

BRUSHES FOR FRESCO, SIGN, SHOW CARD AND CARRIAGE PAINTING (Continued)

## EXTRA FINE OX-HAIR STRIPERS

SERIES No. 108. Round, in Tin, Polished Handles. Hair $1 \frac{3}{8}$ to 2 Inches Long


| No. | Each | Per Doz. | No. | Each Per Doz. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. |  |  |  |  |  |
| 2. |  |  | 5. |  |  |
| 3. |  |  | 6. |  |  |

## EXTRA FINE OX-HAIR BRUSHES

SERIES No. 103. Round, in Tin, Extra Sizes, Polished Handles. A Very Superior Brush. Hair $1 \frac{1}{4}$ to $1 \frac{3}{8}$ Inches Long



# BRUSHES FOR FRESCO, SIGN, SHOW CARD AND CARRIAGE PAINTING (Continued) 

SUPERFINE BROWN SABLE WRITERS
GENUINE HAIR IN QUILLS


## BROWN SABLE STRIPERS

GENUINE HAIR IN QUILLS
SERIES No. $125 \frac{1}{2}$. Best Quality, Red Silk and Gilt Bound



## Gilders' Brushes

CAMEL-HAIR BRUSHES
IN SPLIT QUILLS


SERIES No. 144. Round Top


SERIES No. 145. Square Top


## CAMEL-HAIR LACQUERING BRUSHES



SERIES No. 158. Square Top, Wire Bound in Quills, on White Handles

| Na | Each | Per Doz. | No. | Each | Per Doz. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 |  |  | $7 .$ |  |  |
| 3. |  |  | 8. |  |  |
|  |  |  | 10. |  |  |

GILDERS' BRUSHES (Continued)
CAMEL-HAIR LACQUERING BRUSHES


SERIES No. 157. Round Top, Wire Bound in Quills, on White Handles

| No. | Each | Per Doz | No. | Each | Per Doz. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. |  |  | 14. |  |  |
| 2. |  |  | 16. |  |  |
| 4. |  |  | 18. |  |  |
| 6 |  |  | 20 |  |  |
| 8. |  |  | 24. |  |  |
| 10. |  |  | 30. |  |  |

## FITCH LACQUERING BRUSHES

SERIES No. 67. Square Top, Wire Bound, on White Handles
See Illustration of No. 158, page 122
Each Per Doz. No. Each Per Doz.

| No. | Each | Per Doz. | No. | Each |
| :---: | :---: | :---: | :---: | :---: |
| 1. |  |  | 5. |  |
| 2 |  |  | 6. |  |
| 3. |  |  | 7. |  |
| 4. |  |  | 8. |  |

## GENUINE FITCH LACQUERING BRUSHES

SERIES No. 159. Square Top, Wire Bound, on White Handles


## GILDERS' TIPS

Camel Hair, 4 inches wide, ${\underset{\sim}{2}}_{2}$ inches long
Tip Handles
Each Per Doz.

# China Painting Materials 

## LACROIX'S ENAMEL COLORS

For Painting on Glazed China, Tiles, Earthenware, Etc., in Tubes, ready for use


| $\begin{array}{r} \text { No. } \\ 1 \\ 2 \\ 116 \\ 128 \end{array}$ | BLACKS Per Tube | $\begin{aligned} & \text { No. } \\ & 34 \\ & 35 \\ & 36 \\ & 37 \\ & 38 \\ & 39 \\ & 40 \end{aligned}$ |  | $\begin{aligned} & \text { No. } \\ & 133 \\ & 136 \end{aligned}$ | Peach Blossoms, Per Tube |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Raven Black .......... |  |  |  |  |
|  | Ivory Black |  |  |  |  |
|  | Brunswick Black* |  |  |  | RELIEF |
|  | Outlining Black* ..... |  |  | 65 | Relief, for Gold |
|  |  |  |  |  |  |
|  | BLUES |  |  |  | VIOLETS |
|  | Two Fire Blue | 41 | Sap Green ... | 66 | Deep Violet of Gold |
| 106 | Dark Blue .... | 42 | Bronze Green | 67 | Light Violet of Gold |
|  | Common Blue | 44 | Duck Green ${ }^{\text {Moss Gr }}$ | 68 | Violet of Iron |
|  | Deep Blue ....... | 45 | Moss Green, J. "Yel- | 131 | Maroon* ${ }^{\text {a }}$........ |
|  | Deep Ultramarine |  | lowish | 132 | Pansy* |
|  | Sky Blue | 46 | Night Green |  | WHITES |
|  | Victoria Blue |  |  |  |  |
| 10 | Old Blue | 112 | Coalport Green, Light | 71 | Permanent White |
| 10c | Delft Blue | 120 | Shading Green* ${ }^{\text {² }}$ | 109 | Relief White (Auf- |
| 107 | Blue No. 29 | 123 | Blue Green, Light* |  | setzweiss)* |
| 111 | Cornflower Blue | 124 | Blue Green, Dark* |  |  |
| 117 | Oid Rouen Blue | 134 | Rose Leaf Gre |  | YELLOWS |
| 129135 |  |  |  | 72 | Ivory Yellow |
|  | Sevres Blue |  | GREYS | 73 | Jonquil Yellow |
| 135 |  |  | Grey, No. 1, Li | 74 | Yellow for Mixing |
|  | BROWNS | 49 | Grey, No. |  | Orange Yello |
|  |  | 50 | Pearl Grey, No. 6 |  | Permanent |
| 12 | Chestnut Bro | 51 | Neutral Grey | 114 | Albert's Yellow ${ }^{\text {+ }}$ |
| 13 | Otter Brown |  | Warm | 115 | Egg Yellow* |
| 14 | Van Dyke Brown | 121 | Grey for Fer |  | Canary Yello |
| 15 | Gillyflower Brown .... |  | Royal | 137 | Best Orange* |
| 15 | Brown No, 3 ..... |  |  |  |  |
| 176 | Brown No. 4 or $17 \ldots$ |  | Grey. Warm ${ }^{\text {a }}$ |  | GROUNDING COLORS |
| 17 | Brown M or 108. |  |  |  | Celestial Blue |
| 18 | Dark Brown | 138 | Gold Grey* |  | Indian Blue |
|  | Deep Red Brown |  | Gold Grey |  | Lavender B1 |
| $\begin{aligned} & 20 \\ & 21 \\ & 22 \end{aligned}$ | Light Brown |  | OCHRES | 81 | Marine Blue |
|  | Sepia .... | 53 | Dark Ochre | 82 | Reddish Brown |
|  | Yellow Brown | 54 | low | 83 | Shammy Brown |
|  |  |  |  |  | Carmelit |
|  | CARMINES |  | PURPLES | 85 | Celadon |
| $\begin{aligned} & 23 \\ & 24 \\ & 25 \\ & 26 \end{aligned}$ |  |  | Purple, No. 2 | 86 | Light Coffee |
|  |  | 56 | Crimson Lake | 87 | Chrome Water- |
|  | Carmine, No. 2 ... | 57 | Crimson Purple |  | Copper Water-Green |
|  | Deep Carmine, No. $3 .$. |  | Deep Purple |  | Grounding Green |
|  | CARNATIONS |  | Ruby Purple ......t., | 90 | Steel G |
|  | CARNATIONS |  | REDS |  | I |
| $\begin{aligned} & 27 \\ & 28 \\ & 29 \end{aligned}$ | Carnation, No. 1 | 60 | Capucine Red |  | Fusible Lil |
|  | Carnation, No | 61 | Laky Red | 94 | Maize |
|  | Carnation, Deep ...... | 62 | Orange Re |  |  |
|  | FLUX |  | Bright |  | Coral Red |
| 30 |  | 104 | Bengal Rose | 97 | Rose Pomp |
|  | Flux | 64 | Japan Rose | 98 | Salmon |
|  | GREENS | 108 | Chinese Rose | 99 | Turquoi |
|  |  | 119 | Flame Red* | 100 |  |
|  | Grass Gree | 125 | Rose ${ }^{\text {* }}$ | 101 | Chinese |
|  | brown Green, | 127 | Pompadour Red, No. $23{ }^{*}$ | 102 | Gold Bud |
|  | Dark Gre |  | Superior English Pink* | 105 | Very Fusible |
|  | colors ma | in lone | hape |  |  |

## 

## CHINA PAINTING MATERIALS (Continued)

## FRY'S VITRIFIABLE COLORS IN POWDER

Illustration Full Size


BLACK
Per Vial

German Black .......
German Black .......
Chinese White BLUES
Aztec Blue
Sevres Blue
Banding Blue
Copenhagen Bitue
Air Blue
Baby Blue
Celestial Turquoise
Sky Blue
BROWNS
Yellow Brown
Finishing Brown
Dark Brown
Shading Brown
Auburn Brown
Meissen Brown
GREENS
Moss Green
Olive Green
Royal Green
Russian Green
Persian Green
Yellow Green

Sevres Green.

## Pompadour

## GREYS

Silver Grey
Royal Copenhagen Grey
Warm Grey
Pearl Grey
Grey for Flesh
PINKS AND PURPLES
Roman Purple
Ruby
Rose
Peach Blossom
Palma-Rosa Salmon
American Beauty
REDS
Yellow Red

Per Vial
........
Violet of Iron Blood Red Carnation

## VIOLETS

Royal Purple
Violet, No. 1
Violet, No. 2
Royal Violet

## YELLOWS

Egg. Yellow
Albert Yellow
Lemon Yellow
Primrose Yellow
Trenton Ivory
Oriental Ivory
Imperial Ivory
Grey Yellow
Mixing Yellow
glazes
Iyory Glaze
Yellow Glaze .................
Lavender Glaze
Pink Glaze .
Yellow Green Glaze
Blue Green Glaze
Grey Glaze ......
Arquoise Gla
Azure Glaze
$\qquad$
$\qquad$
$\qquad$
$\qquad$

COLORS SPECIALLY PREPARED FOR MINIATURE AND FIGURE PAINTING


Finishing Brown No.
(Fluxed) $\ldots$................

FRY'S PASTE, ENAMELS, MEDIUMS, ETC.
Per Vial PerVial

Fry's White Enamel
English Enamel
Dresden Relief White (Aufsetzweiss)
Pink Enamel

Coral Enamel
Turquois Enamel
Cobalt Enamel
Dresden Flux

Hancock's Paste for Raised Gold
Hancock's Hard Enamel
Hancock's Soft Enamel

## LIQUID LUSTRES



Per Vial

Girey
Pearl Grey
Blae Grey
Yellow
Rich Irid. Yellow
Orange
Shammy
Brown
Yellow Brown
Rose
Light Green
Dark Green

Blue Green
Olive Green
Blue
Light Blue
Mother of Pearl
Opal
Covering for Gold Lustre (to produce Deep Violet), Per $1 / 2$ Vial Per Vial
Gold
Dark Blic..............
Steel Blue

Chartoyant
Copper
Iridescent Rose
Purple
Violet
Ruby
Black
Silver
Rose.
Brown
Drw Gree.........
Dark Green
Blue Green .......


ROMAN, UNFLUXED, WHITE AND GREEN GOLD
In our "Sphinx" Keramic Golds on Glass Slabs, we believe we have attained the height of perfection in vitrifiable golds and do not hesitate to assert that their merits, i. e., working qualities, moist condition, easy and smooth application, quantity contained on slab, perfect color and excellent covering qualities will meet with the approval and entire satisfaction of the China Painter.

The "Sphinx" Golds are put up on glass slabs in absolutely dustproof boxes. The celluloid cover is not destroyed when taken off the gold. The celluloid is held down tightly over the gold by means of a tin cover with four clamps bent over the glass slab firmly, preventing air and dust coming in contact with the gold. When the gold is to be used, these clamps are to be bent backwards to a perpendicular position, and after use serve to hold the celluloid cover over the gold when the lid is closed.

The proper consistency can readily be obtained by the addition of pure turpentine mixed thoroughly with the gold with a palette knife. Apply with clean brushes. Do not heat the gold to soften. Burnish with soft glass brush, bloodstone or moss agate.

It is advisable to use Unfluxed or Hard Gold over colors or on belleek.
General features of the Quality of our "SPHINX" KERAMIC GOLD:
It comes out of the fire a smooth, even coat. Covers better than most other golds. Will not blister. Can be applied thinner. Mixes easily. Is richer in gold content and will go farther than most other golds.

## Roman or Mat Gold, Unfluxed or Hard Gold, White Gold, Green Gold, Price, per Box .............. Each,

Special Quantity Prices to Teachers and Studios on Request
Also put up in jars containing the equivalent of 6,9 and 12 boxes, for the convenience of large users.

## "SPHINX" KERAMIC BRONZES

Put up on Glass Slabs and packed the same way and same quantity as our "Sphinx" Keramic Roman Gold.
"Sphinx" Red Gold Bronze ....................... Price, per box, each,
" ". "
"Sphinx", Antique Copper Bronze ...................... ". . . . "
"Sphinx" Green Gold Bronze .......................... . . " ". "

## CHINA PAINTING MATERIALS (Continued)

## "STUDIO" ROMAN GOLD

A Good Quality Gold for General Use On Large Glass Slabs, Prepared Ready for Use
"Studio" Roman Gold, on glass slab .........
"Studio" Unfluxed or Hard Gold, on glass slab
Each,

## HASBURG'S "PHGENIX" GOLD

Put on Glass Slabs, Hermetically Sealed
Roman Gold, Hard or Unfluxed Gold and Green Gold ........... Per box,

# LIQUID GOLD, LUSTRES 

FOR CHINA PAINTING

"KERAMIC ERASER",
Erasing Liquid for China Colors in $\frac{1}{2}$-ounce wax bottles Each, NOTE.-This is fluoric acid. Dangerous and must be handled with utmost care.

WEBER OILS AND MEDIUMS FOR CHINA PAINTING

Thick Oil
Dresden Thick Oil (genuine) Fat Oil Turpentine
Rectified Turpentine
Tinting Oil (for thinning Colors)
Best English Grounding Oil (for dusting)
Balsam of Copaiba
Oil of Lavender
" " Cloves
.....
$\qquad$

Fry Medium, 1-ounce bottle $\qquad$
Fry English Grounding Oil, 1-ounce bottle ....Each
Fry Special Tinting Oil 1-ounce bottle ............ "
Fry Enamel Medium, 1-ounce bottle ......................
Fry Oil for Raised Paste, 1-ounce bottle

Pint,

## CHINA PAINTING SUNDRIES

## PENCILS FOR MARKING ON CHINA AND GLASS

"Sphinx" Paper Pencil, black, for Marking on China, Each, Per Doz, blue and red
Asbestos Cord for Tying Cemented Articles, per 5 yards
in sheets (Platten), sixe $10 \times 10$
Per sheet,
Graphite Transfer Paper, in sheets, $18 \frac{1}{2} \times 23$.
Friskett Tracing Paper, in sheets, $17 \frac{1}{2} \times 23$, very transparent....
Per sheet,
Doz.


Each Per Doz.
Agate Tracer, in Metal Ferrule, Wood Handle
Pocket Tracer, Metal Ferrule, reversible, for tracing fine
lines on gold

## GLASS

BRUSHES
For Matting Burnish Gold


## STILTS

Nos. $1,2,3$ and $4 \ldots \ldots \ldots \ldots \ldots \ldots$.......................................... Groz., Gross,
For Palette Knives, Horn and Steel Spatulas, Steel Erasers, see pages 55-56

## WHITE GLAZED TILES

$$
\text { Size, } 6 \times 6
$$ Each,

 China Brush Rest, 5i inches Each, Per Doz.,

Each Per Doz.
Porcelain Cup, used for Liquid Bright Gold, Fat Oil, etc.


PALETTES
For China Painting
Best Imported
No. 1
No. China Palette, with 21 round recesses and cover, size $4 \frac{1}{2} \times 7$ ?
1 Chen inches
$1 \frac{1}{2}$ China Palette, with 19 extra deep round recesses and two square sloped recesses for oils, with cover. In appearance like No. 1 illustrated

2 China Palette, with 24 round recesses and place for mixing colors, size $5 \times 9$ inches


No. 2

CHINA PAINTING MATERIALS (Continued)
THE "SPHINX" IMPROVED CHINA PAINTING PALETTE BOX (Patented)

With Removable Pallette


Directions.-For the purpose of cleaning or replacing the Palette, in case of breakage, slide back the sleeve connecting and locking the two ends of the steel spring wire that holds the Palette in its place. By lifting up the two ends and pulling the wire out of its groove, from any one side, the Palette is easily removed and afterwards placed back in its former position in reverse manner.

Size
$9 \times 13$
Made of Heavy Japanned Tin, in two Sizes
Each Size
Each $6 \times 7$ inches, special size for gold.

## WEBER DUPLEX PALETTE (Patented) FOR CHINA PAINTERS



Size when closed $61 / 8 \times 131 / 4$ inches
There are two separate mixing slabs of heavy opal glass and one tray at side for brushes, etc., practically two palettes in one.

These slabs are each 6 inches by 6 inches, and while perfectly rigid when in use can be easily removed, being fitted with patented device for this purpose.

The material and workmanship are of the same high class that characterizes all our japanned tin ware.
Price, each Extra Slabs, each

## CHINA PAINTING MATERIALS (Continued)



BANDING WHEELS

## WEBERBANDING WHEEL

 No. 1FOR LINING CHINA
Polished Metal Disk, $61 / 2$ inches in diameter, with indented lines for centering vases, cups, etc., revolving on neat iron stand to use on table ......... Each,


No. 1

## WEBER CHINA DECORATORS' BANDING WHEEL, No. 2

On heavy iron tripod to stand on floor, with polished metal disk, $81 / 4$ inches diameter, turning on steel pivot. Set-screw to place high or low .........................................Each,
"STAR" SELF CENTERING COMBINATION BANDING WHEEL AND ARM REST

"STAR" SELF CENTERING COMBINATION DIVIDING BANDING WHEEL AND ARM REST


The banding wheel is made of aluminum, finished and polished with the greatest care by expert workmen, perfectly true and balanced to a nicety. It can be rotated with the greatest ease, thereby insuring the drawing of the finest hairlines. The Arm Rest is made of aluminum, highly polished, adjustable in height and length, furnished with pointed straight edge that can be used to draw radial lines or any design desired, accurately spaced or plates or other similar work. Designs cut in thin sheet copper or brass can be made to slip over end of straight edge and transferred to china as shown in cut.

## KILNS FOR FIRING CHINA

 Quoted on request. Send for special circular
## Brushes for China Painting

## CAMEL-HAIR PENCILS

NOTE.-In Weber China Painting Brushes there is nothing but the very highest quality hair and workmanship. These brushes are not to be confused with those frequently offered in the market at much lower prices.

SERIES No. 88. "SHORT PAINTING"


Each
Per dozen
SERIES No. $90 \frac{1}{2}$. "LONG PAINTING"



## BRUSHES FOR CHINA PAINTING (Continued)

OAMEL-HAIR PENCILS (Contimued)
SERIES No. 90. "POINTED SHADERS"


SERIES No. 91. "SQUARE SHADERS"


Nos.
1
Each
Per dozen

BRUSHES FOR CHINA PAINTING (Continued)
CAMEL-HAIR PENCILS (Continued)
SERIES No. 93. "TRACERS"

Nos.
Each
Per dozen


Nos. $1 \quad 2$

1
$\qquad$


2


3


4

5


6

8

SERIES No. 94. "LONG TRACERS"


BRUSHES FOR CHINA PAINTING (Continued)
CAMEL-HALR PENCLLS (Continued)
SERIES No. 95. "SQUARE LINERS"


## BRUSH HANDLES

For Quill Brushes
Pointed Ends, Small, Medium, Thick, Cedar Wood, Plain Each Peı Doz. Gross ST. LOUIS BALTIMORE

## BRUSHES FOR CHINA PAINTING (Continued)

SERIES No. 92. "OUTLINING OR LETTERING BRUS.HES"


TRENTON TRACER

Each
Per dozen
Per gross
SERIES No. $93 \frac{1}{2}$. RED SABLE LINERS OR PASTE BRUSHES

No. 0

No. 1
No. Each Per Doz. 0. 1. $\qquad$

## RUSSIAN SABLE TINTING BRUSHES

Extra Thin and Short, in Ferrules on Handles


SERIES No. 66
Widths, inches .............. $\frac{\frac{1}{4}}{\frac{3}{8}} \frac{\frac{3}{2}}{\frac{3}{4}} 1$
Each
Per dozen


## BRUSHES FOR CHINA PAINTING (Continued) RUSSIAN SABLE BRUSHES

Black Polished Handle, Fine Quality, Flat for Tinting


## CAMEL-HAIR BRUSHES

Flat, Extra Thin, in Tin Ferrules for Ground Laying


SERIES No. 51
Width, inches
Each
Per dozen


Size
Each

FITCH STUBBERS


No,
61/00 Fitch Stubbers smaller Each Per Doz. 63/00


## BRUSHES FOR CHINA PAINTING (Continued) FITCH STUBBERS (Continued)



No. Fitch Stubbers, short
64 Each Per Doz.


Fitch Lacquering, in Split Quills, size 1

GENUINE FRENCH FITCH-HAIR STIPPLERS
In Quills, Square Top


# F.WEBERCO P H I L A D E L P H I A ST. LOUIS BALTIMORE 

## Weber Artist Soft Pastels

Weber Artist Pastels are prepared only from the finest quality, chemically pure pigments possessing the same permanent and durable, physical and chemical properties common to other Weber Artist Colors.

Artist Pastels may be applied to any surface which has sufficient "tooth" or texture to which the Pastels will readily adhere. Weber Artist Pastel Boards, Paper and Canvas have especially prepared surfaces (in Fine Fibre, Velvet and Marble Dust finishes) which assure pleasant working qualities, together with the most permanent and brilliant results.

Weber Artist Pastels are very fragile, as are all high quality pastels, and when packed by us are in unbroken condition. Some sticks are occasionally received broken, which however is of no detriment to the pastel as many Artists prefer small pieces rather than the whole stick.

All separate colors of Weber Pastels may be purchased singly, being made in four tints of each color, numbering 1, 3, 5, 7. Number 1 representing the deepest, number 7 the palest tint.

Weber Artist Pastels are made in two grades, Soft and Half Hard. The Soft Pastel is for general use, the Half Hard being usually employed for detail work.

In order to fix the pastel permanently, an application of Weber Fixatif sprayed on with an atomizer will prevent the drawing from smearing or rubbing off and will permit of considerable handling, without danger to the painting.

The Student is referred to "A Treatise on Pastel Painting," by Goupil, in which much valuable information and help in the technique of pastel painting is given.

Finished Pastel Paintings should always be framed under glass.

## LARGE OR FULL SIZE, SINGLE COLORS

Put up in wooden boxes of twelve pastels, either of one color assorted in four tints, Nos. 1-3-5-7, or of one tint only. Each color is graded in four tints, o. which No. 1 is the deepest. Intermediate tints made to order in minimum quantities of at least six dozen sticks.



Chrome Green (Yel-
low Gr.) .......1-3-5-7
Emerald Green ....1-3
" " .....5-7
" " asst.1-3-5-7
Olive Green ......1-3-5-7
Terre Verte .......1-3-5-7
BLUES
Cobalt Blue ........1-3
un
" " ........5-7
" " asst. . 1-3-5-7
Ultramarine Blue. . $1-3-5-7$
Prussian Blue .....1-3-5-7
Violet ..............1-3-5-7

## WEBER ARTIST SOFT PASTELS (Continued)



## WEBER ARTIST HALF HARD PASTELS



Each color is made in four tints, Nos. 1-3-5-7, of which No. 1 is the deepest.

Each color is put up in a wooden box of 12 pastels, assorted, or of one tint only.

No. Each Doz.
White
Black $\qquad$
Black Grey ........1-3-5-7
Blue Grey ..........1-3-5-7
Brown Grey

## BROWNS

Burnt Ochre ...... 1-3-5-7
Raw Umber .......1-3-5-7
Burnt Umber ......1-3-5-7
Brown Red ........ 1-3-5-7
Burnt Sienna ..... 1-3-5-7

## GREENS

Chrome Green (Yel-
low Gr.) .........1-3-5-7
Emeraude Green
(Blue Green) .....1-3-5-7
BLUES
Prussian Blue ......1-3-5-7
Ultramarine Blue. . 1-3-5-7
Cobalt Blue ........ 1-3 " 6 ........5-7
. . asst. .. 1-3-5-7
Violet . . . . . . . . . . 1-3-5-7

No. Each $\begin{gathered}\text { Per } \\ \text { Doz. }\end{gathered}$ REDS
Flesh Ochre ...... 1-3-5-7
Indian Red .........1-3-5-7
Saturn Red ........ 1-3-5-7
Red Brown, Extra

> Deep ............. 1-3

Red Brown, Extra

> Deep .............5-7

Red Brown, Extra
Deep, assorted ..1-3-5-7

Carmine ........... 1-3 " $\quad . . .{ }^{\prime} .{ }^{5-7}$
. assorted. .1-3-5-7
Vermilion .......... 1-3 " ............5-7
assorted. 1-3-5-7
Madder Lake Aliz.. 1-3
" " " 5-7
assorted
$1-3-5-7$

## YELLOWS

Chrome Yellow ...1-3-5-7
Yellow Ochre .... 1-3-5-7

## Pastels Assorted in Boxes

## WEBER SOFT PASTELS IN FLAT WHITE WOOD BOXES



[^8]
## WEBER HALF-HARD PASTELS IN FLAT WHITE WOOD BOXES




Goupil, "Treatise on Pastel Painting." In handbook form; valuable for beginners

## PASTEL OUTFITS

Filled Complete for Painting in Pastels

Illustration of the
"Amateur" Pastel
Painting Outfit

The "Amateur's" Outfit, consisting of Polished Maplewood Box, fitted with tray, having two divisions for Pastels, inside measurement of box $8 \times 10 \frac{10}{2} \times 1 \frac{1}{8}$ inches. The box contains 58 Weber Soft Pastels, assorted fine colors, bottle of Fixatif, Folding Tin Atomizer, 2 Leather Stumps, 4 Grey Paper Stumps, 6 Tortillons, Pointed Rubber, Brass Crayon Holder, 3 Black Conté Crayons, 6 Thumb Tacks, 2 pieces Pastel Paper and piece of Chamois Leather
The "Scholar's" Outfit, consisting of Polished Maplewood Box, with fancy Brass Handle and Fastener, fitted with divisions for materials and tray with lid for Pastels, inside measurement of Box $6 \times 101 \times 18$ inches. The box contains 29 Weber Soft Pastels, assorted colors, bottle of Fixatif, Folding Tin Atomizer, Leather Stump, 3 Grey Paper Stumps, 3 Tortillons, Brass Crayon Holder, Pointed Rubber, 2 Black Conté Crayons, 6 Thumb Tacks, 2 pieces Pastel Paper and piece of Chamois Leather

PALETTE-CRAYON BOX


Polished wooden case, with thumb-hole, and chamois mounted on the inside of lid, containing an assortment of Crayons, Sauce Stumps, Crayon Holder, etc. . ........................................... Per box,

## GIRAULT'S SOFT PASTELS

## In Flat White-Wood Boxes

No.
6
5
4
3
2
$2 \frac{1}{2}$
2
1
00
000

$$
\frac{1}{8} \text { size, with } 30 \text { Crayons, assorted colors }
$$

$$
\text { Ordinary, } 44 \text { Crayons, assorted colors }
$$

$$
\text { fine, } 56 \text { Crayons, assorted colors, with Carmine }
$$

$$
\begin{aligned}
& 66 \\
& 90
\end{aligned}
$$

$$
\text { Full size, } 130 \text { Crayons, assorted colors, with Carmine }
$$

$$
\text { Double bottom, } 164 \text { Crayons, assorted colors, with Carmine }
$$

$$
3 \text { rows, } 300 \text { Crayons, assorted colors, with Carmine }
$$

$$
000 \text { Treble bottom, soft and half-hard pastels, } 378 \text { Crayons, assorted ... }
$$

## GIRAULT'S HALF-HARD PASTELS

Per Box


# FRENCH HARD PASTELS 

In Round Paper Boxes

| Ordinary Grade Superfine Grade |  |
| ---: | ---: |
| Per Doz. | Per Doz. |
| Per Box Boxes Per Box Boxes |  |

12 Colors, in box....
18
24
". "
"
"
"
, ,



Per Box
$\square$

## F.WEBERCO. Prthtadelphit

## CHARCOAL



No.
Ordinary, French, 6 inches long, 50 sticks to box, green edged .....
Per Box
2 Vine, thin sticks, 6 inches long, 25 sticks to box, blue edged .........
3 Berville Venetian, extra dur (extra hard), 6 inches long, 50 sticks to box, blue edged
4 Berville, small, Petit Buisson, soft, 50 sticks to box, gray box ......
Berville, large, Gros Buisson, very soft, 30 sticks to box, gray box
P. A. Willow, small, Petit Buisson, 50 sticks to box, yellow edged. .
P. A. Willow, medium, Moyen Buisson, 50 sticks to box, red edged..
P. A. Willow, large, Gros Buisson, 50 sticks to box, blue edged ....
P. A. Venetian, 50 sticks to box, orange edged

10 Conté Venetian, 50 sticks to box, orange edged
11 Conté Fusains Buisson pour̃ Dessin, 50 sticks to box, maroon edged.
12 Rouget, extra fine, ends of sticks wrapped in foil, No. 1 hard, No. 2 medium, No. 3 soft, 25 sticks to box, green box, red edged
15 Large sticks, $3 \times 8$ inches, 50 sticks to box, green box
16 (Formery No. 7), large sticks, $\frac{1}{2} \times 8$ inches, 50 sticks to box ..........
17 (Formerly No. 8), extra large sticks, $\frac{3}{4} \mathrm{x} 8$ inches, 25 sticks to box...
CHARCOAL, CRAYON AND PASTEL POINTER


The difficulty heretofore experienced to point a Charcoal Stick, Crayon or Pastel Crayon by means of a knife, sand paper or other contrivance, has been most satisfactorily overcome by this simple Pointer, and the saving of material is quite a feature of its use.

Directions.-Hold the Pointer firmly between the first three fingers of the left hand and turn the article to be pointed between the thumb and fore-finger of the right hand forward and backward in quick motion, pressing it slightly through the opening of the same against the conical-set knives.

Each ....... Dozen .........
For Fixatifs, see page m6


## CRAYONS AND SAUCE CRAYONS



Weber "Philadelphia" Sauce Crayon, a deep rich bluish
Each Per Doz. Per Gross black, wrapped in foil, packed 3 dozen in a box... Weber "Sphinx" Sauce Crayons, a deep rich brownish black wrapped in foil, packed 3 dozen in a box...
Weber Sepia Sauce Crayons, wrapped in foil
Conté, Sauce, Velvet, wrapped in foil
CONTE CRAYONS. No. 1, Hard. No. 2, Medium. No. 3, Soft
Small Sticks, 3 Inches Long, Packed in Boxes of 1 Dozen Sticks, 12 Boxes (1 Gross) to Packages
Conté, square, black, Nos. 1, 2, 3
Each Per Doz. Per Gross
Conté, "4 red, Nos. 1, 2, 3 ..........................
Conté, " white
Conté, " bistre (or sepia)

Conté, " white, Nos. 1, 2, 3
Conté, " red.

## CRAYONS IN WOOD

Conté, in wood, black, No. 1, hard, ordinary quality
Conté, ". " ". No. 2, medium, ordinary quality,
Conté ". ". " No. 0, extra fine, very hard...
Conté, " " " No. 1, " " hard ........
Conté, " " " " No. 2, " " medium .....
Conté, " " " No. 3, " " soft ..........
Conté, ". " ." velvet (Velour) ..................
Conté " " white
Conté, " " sanguine (blood red)
Weber, in plain cedar, very fine quality, hard, medium and soft
Wolff's Carbon Pencils, in wood, smooth cedar finish, 2h, h, hb, b, bb 3b
Weber white soapstone, in plain cedar wood

## LITHOGRAPHIC CRAYONS

[^9]
## WEBER-SUSSNER COLORED CRAYON PENCILS

These Crayon Pencils are of exceptionally high quality. The Crayons are well made and graded and encased in cedar. Artists, Architects and Engineers will find them of great value in colored crayon work.

No,
Each Per Dos
5505 Weber/Sussner Colored Crayon Pencils in wood, 7 inches long, Superfine Quality, made in 50 different colors ..............................

## SCALE OF THE COLORS

00 Scarlet
1 White
2 Light Chrome Yellow
3 Light Blue
4 Orange
5 Vandyke Brown
7 Yellow Ochre
8 Carmine Rose
11 Light Green
12 Vermilion
13 Dark Green
14 Red Brown
15 Olive Green, Light
16 Red Violet
17 Indian Red
18 Ultramarine
20 Black
21 Sepia
22 Olive Green, Deep
24 Dark Violet
25 Burnt Sienna
26 Dark Blue
27 Yellow Green
28 Olive Brown
31 Raw Umber

32 Red Ochre
33 Deep Chrome Yellow
34 Blue Green
35 Blue Violet
/36 Dark Grey
37 Light Grey
38 Mineral Blue
39 Olive Green, Medium
, 40 Light Red
41 Light Carnation
42 Light Ochre
43 Light Rose
44 Dark Carnation
46 Burnt Umber
49 Finest Carmine
53 Deep Rose
54 Madder Lake
56 Green, Medium
57 Green, Deep
59 Mauve
61 Prussian Blue
62 Neutral Tint
63 Chrome Yellow, Med,
68 Cobalt Blue
69 Imperial Blue

Sample Color Card of Sussner Crayon Pencils sent on application to Schools, Colleges and the profession.

## ATOMIZERS AND FIXATIF



No.
Each Per Doz.
1 Atomizer, Japanned tin, folding, improved style
2 Indestructible Atomizer, white metal
4 Atomizer, nickled brass, will not break

## FIXATIF

In Glass Bottles

Weber "Fixatif," for Pastel and Charcoal Drawing $\qquad$
Weber "Sphinx" Fixatif, superior grade, especially prepared for fine Pastel Paintings
$\qquad$

## WEBER PASTEL CANVASES



## WEBER PAPER PREPARED FOR PASTELS WITH FIBRE FINISH



## PASTEL BOARDS

No.
$27-20 \times 26$ inches, fibre finish
28-20×26 " marble dust finish ........................................
29-20×26 " velvet finish
$37-30 \times 40$ " fibre finish
38-30 40 " marble dust finish
39- $30 \times 40$ " velvet finish ....
46-French Pastel Paper, grey and garnet Felt, in rolls, 54 inches by 11 yards Per yard, Per roll,

Note.-For Charcoal and Crayon Papers, see pages 166 and 169

## TORTILLONS



[^10]
## STUMPS, FOR CRAYON SHADING

Each Kind Put Up in Packages of 3 Dozen


FRENCH

SERIES No. 7
Yellow Leather

| No. | Each | Per Doz. |
| :---: | :---: | :---: |
| 1. |  |  |
| 3. |  |  |
| 4. |  |  |
| 5. |  |  |
| 6 |  |  |
|  |  |  |
|  |  |  |

SERIES No. 9
Grey Paper


## FELT STUMPS

By the nature of their material, Felt Stumps surpass all similar articles in softness and durability. We make four sizes, of which the two larger sizes are flattened at one end diagonally, in order to afford the blending of broader surfaces, while the other ends are pointed, as on ordinary stumps.


SERIES No. 13

| Nos. |  |  |  |
| :---: | :---: | :---: | :---: |
| Sizes in diameter, inches Each | 18 | $1{ }_{10}$ |  |

No. 15 Felt Blocks, for shading broad surfaces, $2 \times 1 \frac{1}{4} \times \frac{1}{2}$ inches ... Each,

## NIGRIVORINE RUBBER STUMPS

No.
Each Per Doz.
5539 Nigrivorine Eraser and Blender, small size, No. 3, in boxes of 2 dozen
Nigrivorine Eraser and Blender, medium size, No. 2, in boxes of 2 dozen
Nigrivorine Eraser and Blender, large size, No. 1, in boxes of 2 dozen

## CHAMOIS SKINS

## First Quality



## CRAYON HOLDERS




## EASEL FOR CHARCOAL DRAWING

No. 40 Three-legged folding easel, 50 inches high, with $20 \times 26$-inch board attached. For sitting, too. Largely used in Art Schools. Price


## MODELING CLAYS AND MATERIALS

## DRY MODELING CLAY

Finely Ground and Prepared. To be Dampened With Water
5 pounds in package $\qquad$ Per package, In 100 -pound boxes Per pound,


A finely prepared antiseptic Modeling Clay for Sculptors, Artists, Schools of Art, Elementary and Public Schools, Kindergartens, Lecture Rooms, homes and Hospitals. It is clean and harmless, requires no water. Being pliable, it is easily modeled. Remains plastic for an indefinite time, and can be worked over and over again. Has an agreeable odor and does not soil the hands.

Plastilina is used to illustrate almost every branch of instruction and for class teaching, artistic anatomy, principles of ornament, geometry and blackboard models, large and small figures, it is especially valuable.

In the home it serves as an amusement and a means for developing the inventive and constructive faculties of the young.

Plastilina is made in the following Colors: No. 1, Gray; No. 2, Green Gray; No. 3, Green; No. 4, Brown; No. 5, Yellow; No. 6, Terra Cotta; No. 7, Blue.

Put up in 1-pound cartons ................. Each,

## Special Prices in Quantity

## MODELING WAX

Various Colors, viz.: Red, Blue, Green, White, Yellow, Black, in $\frac{1}{6}$-pound bars. Each,
This wax is especially made for very fine modeling on a small scale. Is used by Medal Modelers, Die Sinkers and Engravers, and also for taking impressions.

## "MODELINE" OUTFITS

[^11]
## FWEBERCO. $\underset{\text { ST. LOUIS }}{\text { H I I }}$ L $A$ E L $\underset{\text { BALTIMORE }}{P}$ BALTIMORE 

## BOXWOOD MODELING TOOLS




## STEEL MODELING TOOLS

For Clay or Plaster


24


35


Steel, all Shapes, 6 inches long . . . . ..................................... . . . . . . . . .
Steel, heavier construction, $7 \frac{1}{2}$ to 8 inches long Each,

# MODELING MATERIALS (Continued) 

## MODELING TOOLS (Continued)

For Clay or Plaster



Boxwood, Slanting Wire Loop on One End and Flat Shape on the Other


## WAX MODELING TOOLS

Made of Finest and Hardest Steel
Five shapes only, 6 inches long ......... Per Tool, Per Set of 5,

## MODELING MATERIALS (Continued)

## LEATHER MODELING TOOLS

For Embossing or Repoussée Work


Each, Set of 5, in Box, Price per Set,

PLASTER-PARIS MODELS


An assortment of about 500 different models, consisting of Geometrical Blocks and simple Designs for Elementary Drawing and Modeling: Leaves, Flowers, Scrolls, Ornaments and Architectural Designs; Hands, Arms, Feet, Legs, Parts of the Face, Eyes, Ears, Mouths and Noses; Torsos, Children's Heads and Figures; Antique and Modern Masks, Heads and Busts; Bas-reliefs, Animals and Reclining Figures; Antique Statues, Groups and Vases.

Complete Illustrated Catalogue and Price List of the above, to order from, sent on application. Price, postpaid, $\$ 100$.
(The price of Catalogue will be credited to the first order in amount of $\$ 1000$, or over.)

MODELING MATERIALS (Continued)

## MODELING STAND

For Work in Relief


No. 45


## MODELING EASEL

For Supporting Modeling Boards

$$
\text { No. } 46
$$

No.
45 Modeling Stand, height 12 in., base $11 \times 14$ inches, board $13 \times 14$ inches ...
46 Modeling Easel, height 66 inches
47 Modeling Table, height 46 in., with revolving top, $16 \times 16$ inches


## Etchers', Engravers' and Lithographers' Tools and Materials

## ETCHERS' PRESSES



The "Studio" Etchers' Press is very strongly and durably constructed, of selected hard wood, with metal parts of wrought and cast iron. The core of the roller is of the best grade machine steel. It is not intended for commercial work, but for the purpose for which it is intended, namely, proof-taking, it is the best press on the market.

Roller, 11 inches long; board, $11 \times 26$ inches; without felts. Price, each,

## BLANKETS

Blankets, white felt, $11 \times 18$ inches for "Studio" Press, $6 e t$ of 2 light and 1 heavy. Per Set


Rubber Rollers, for Ground Laying in Rebiting, $1 \frac{13}{}$ inches wide

" . " . . . . .
4

## STEEL BURNISHERS

Straight or Bent<br>Best Quality Steel, in Rosewood Handles

Length of Blade, inches
2
3
4
Each
Charcoal for Grinding Plates, size $4 \frac{3}{2}$ inches by 23 inches ...... Per piece,
Cloth for Wiping Plates . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . " yard,


Dabbers, covered with finest Silk, for Ground Laying, as illustrated Dabbers, for Charging the Plate with Ink ..

Per Sheet Per Doz.
Emery Paper, No. 000, finest to No. 4 Cloth

## ETCHING GROUND IN BALLS

Weber Etching ground is used and endorsed the world over, quality assures pleasant working and satisfactory results.

Etching Grounds, in Balls ........................................... Per ball,
Liquid, instantaneous drying,
Per 2-ounce glass-stoppered bottle,
PRINTING INK
So prepared, of selected ingredients, that the finest of etchings will be reproduced exactly.
Printing Ink, Black, Burnt Sienna, Burnt Umber, Vandyke Brown, in $\frac{1}{2}$-pound
and 1 -pound cans ........ Per $\frac{1}{2}$-pound can, Per 1-pound can,
Per Lb.
Printers' Varnish or Plate Oil, No, 0, Thin
" " " " " No. 1, Medium
" " " " " No. 3, Strong
Stopping-out Varnish ...................................... Per ounce bottle,
Wax for Walling . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Per 4-ounce roll,
Wax Tapers
Per package,

Etching Points or Engravers' Markers, Double Points ............ Each,
Gravers, square and lozenge, various shapes, sizes and makes. Can be supplied at the standard prices.

Each Per Doz.
Graver Handles, plain
long, with German-silver Ferrule
Each
Hand Vises with jaws about 1 to $1 \frac{1}{2}$ inches to hold plates while heating ..


## ROULETTES



Roulettes, Nos. 1 to 10 , from 1 to 6 rows of teeth
Tracing Points, set in wood, Nos. 1 to 6


Pads for Engravers, Filled, inches, $\begin{array}{lllll}5 & 6 & 7 & 8\end{array}$ Each
Rockers, 2 inches wide, with $26,40,52$ or 72 teeth to the inch . . . . . . .............................Each,

SCRAPERS, CONCAVE, in Polished Handles, Finest Quality
Sizes, inches
Each

ENGRAVERS' METAL T-SQUARES


No.
4995 Steel Blade, Fixed Brass Head.
Inches

$$
6
$$

$$
8
$$

10
Each
4996 Steel Blade, Movable Brass Head, with
Swivel.
Inches
6
8
10
Each $\qquad$

## PLATE PAPERS



## JAPANESE PAPERS



## INDIA PAPER



## COPPER, ZINC AND STEEL PLATES

COPPER PLATES, all sizes, of 19 gauge, per square inch ............
18 " " " ". .............
17 ." .. .. .. ..............
16 .. .. .. .. ..............
In ordering Copper Plates, please state size and gauge wanted.
ZINC PLATES, any size, 16 gauge, per square inch ..................... 14

BEVELING of Copper or Zinc Plates will be charged for at $\frac{1}{2}$. per sq.
inch extra.

## ETCHERS' GUIDES

Weber Handbook on Etching, by Devitt Welch, with instructions and comparisons of the methods of various masters. Modern and up-todate
ROBERTSON, H. R. The Art of Etching explained and illustrated ....

FOR LITHOGRAPHIC PENS
(See Index)


Needles, assorted. Nos. 1 to 6, round
extra thin, Nos. 1 to 3 , round
oval lozenge, Nos. 1 to 3
Nos. 4 to 6
square, Nos. 1 to 3
Nos. 4 to 6
flat, Nos. 1 and 2
Nos. 3 and 4
Awls, 5 edge, assorted, Nos. 1 to 3
Parallel Needle Holders

## DOTTING OR TRACING WHEELS



Tracing Wheel, straight
bent

## FRENCH GILDERS' CUSHIONS

No. Medium, size $5 \times 8$, fine sheep, parchment covered $\ldots .$. ..... Each Per Doz.
1
2 Large, size $6 \times 9 \frac{1}{2}$, fine sheep, parchment covered
Per Book Per Pack
GOLD LEAF, Lemon. XX
Pale, XX
Usual
Each Pack Contains 20 Books of 25 Leaves Each
SILVER LEAF, $3 \frac{3}{3} \times 3 \frac{3}{3}$ inches
ALUMINUM LEAF, book of 50 leaves, $5 \frac{1}{2} \times 5 \frac{1}{2}$ inches

## GOLD SIZES

Each Per Doz.
Burnish Gold Size, in 1-pound glass jars
Oil Size, in 1-pound cans
Quick-drying Gold Size, per $\frac{1}{2}$ pint
Japan Gold Size, $2 \frac{1}{2}$-ounce bottles
$\frac{7}{2}$-pint cans
1-quart cans
GILDERS' KNIVES
No.
144 Fine, single edge, 6 -inch blade
452
Each Per Doz.
$\qquad$

## STENCIL KNIVES, MATERIALS



## TAPESTRY OIL-COLOR OUTFITS

No. 1. In Stiff, Strong Carton. Six Selected Colors in Tubes, Bottle of Medium, Assortment of Brushes, 3 Mixing Dishes, Mlustrated Catalogue of Designs and Materials, Thumb Tacks, 2 Stencils and Piece of Canvas. Price, complete

No. 5. Academy Wooden Box, Size $12 \times 6 \frac{1}{2} \times 2$ inches. Containing 10 Tubes of Selected Weber Tapestry Oil Colors, 1 Bottle Medium, 3 China Cups, 1 Palette Cup, 1 Palette Knife, 3 French Bright's Bristle Brushes, 2 Bristle Poonah Brushes, 1 Sheet Tracing Paper, 1 Sheet Transfer Paper, 1 Dozen Thumb Tacks, 2 Stencils and a Copy of "Guide to Tapestry Painting and Stenciling." Price, complete

Catalogue of Tapestry and Stencil Designs, Each,
TAPESTRY CANVAS
Prices and Samples on Application

## FRENCH PEN PAINTING MATERIALS

Special Price List Sent on Request

## FWEBERCO. P H I L A D E L P H I A BALTIMORE

## FLINT AND AGATE BURNISHERS

For Gilders, Bookbinders, and for Illuminating. In Brass Ferrules Polished Handles


Curved Point Nos
Price, Each

## FLINT BURNISHERS

AGATE BURNISHERS FOR ILLUMINATING
Agate, in Albata Ferrules. Polished Handles


Pencil Point


Each

Curved Point, Nos. 39, 40, 41, 42, 43
Angular Point, Nos. 44, 45
Pencil Point, Nos. 46, 47
Pencil Point, Nos. 48, 49, 49 B
Flat End, Nos. 50, 52
Oval Point, Nos, 51, 51 B
Spear Point, Nos. $53,53 \mathrm{~B}$

## CELLULOID-in Sheets

Sheets, $20 \times 50$ inches
Thicknesses
$5 / 1000 \quad 10 / 1000 \quad 15 / 1000$
$20 / 1000$
Clear and Transparent, per sheet
Semi-Transparent, one side, satin finish, per sheet
White, opaque, smooth both sides, per sheet
White, opaque, smooth one side, other side dull
per sheet
Transparent clear celluloid can be furnished in $50 / 1000,60 / 1000,70 / 1000$ and $80 / 1000$, in sheets $20 \times 50$ inches, at per pound.
Colored celluloid in sheets can also be supplied at current prices.
GELATINE
Per 100



## Fabriano Hand-Made Drawing Papers

Especially made, in three surfaces, for Water Colors, Pen and Ink, Wash Drawing, Mechanical Drawing, Illustrating, Etching, and, also, frequently used by photographers in gum printing.
These Papers, now well known in this country have been for many years the standard of excellence with Artists, Draftsmen and in Government Offices on the continent of Europe. They are manufactured by the world-renowned Fabriano Paper Mills, Italy, which have been in existence for over 450 years, and have the reputation of making the finest Hand-made Papers for Drawing and Water Color Painting, as well as for Bank Note Engraving, Bonds and all Documentary purposes, where a strong, pure fibre and even texture are essential.

We have, since 1907, the sole agency for the United States for these papers and supply them in all the standard sizes and weights.

The prices compare very favorably with those of other well-known handmade papers, and in view of the very high and select quality of Fabriano Papers, are extremely reasonable.

We invite a trial of these papers and are confident that they will be found to meet the requirements of the most exacting Artist or Draftsman.

All genuine Fabriano Papers are watermarked: "P. M. F." or "Fabriano," or with a combination of both.

## Made in Three Surfaces, or Textures, viz.:

"H. P." signifying Hot Pressed, or Smooth Surface.
Mostly used for Pen and Pencil Drawing and for Mechanical Drawing.
"C. P." signifying Cold Pressed, or Finely Grained Surface.
Mostly used for Pencil and Crayon Drawing and Water Color Painting,
"R." signifying Rough, or Coarsely Grained Surface.
Used for Water Color Painting.

|  | (Regular Weights) |  | $\begin{aligned} & \text { Per } \\ & \text { Quire } \\ & \text { of } 24 \end{aligned}$ | $\begin{aligned} & \text { Per } \\ & \text { Ream } \\ & \text { of } 480 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| No. | Size, inches | Sheet | Sheets | Sheets |
| 2900 | Cap, H. P. and C. P. . . . . . . . . . . . . . 13x17 |  |  |  |
|  | Demy, H. P. and C. P. . . . . . . . . . . 15x20 |  |  |  |
|  | Medium, H. P. and C. P. ............. 17x22 |  |  |  |
|  | Royal, H. P., C. P. and R. ............. 19x24 |  |  |  |
|  | Imperial, 72 tb , H. P., C. P. and R. .....22x30 |  |  |  |
|  | Dble. Elephant, 1331b, H. P., C. P. and R. $26 \times 40$ |  |  |  |

Imperial, 140 tb , H. P., C. P. and R. ...... $22 \times 30$
Dble, Elephant, 240tb, H. P., C. P. and R. $26 \times 40$
Antiquarian, No. 1, 2401b, H. P. and C. P. $31 \times 53$
Antiquarian, No. 2, 3851t, H.P. and C. P. $35 \frac{1}{2} \times 56$
Sample book cheerfully sent on request to schook and colleges, drawing rooms and to the profession, generally.

## WHATMAN'S HAND-MADE DRAWING PAPER

Made in three surfaces, or textures, viz.:
"H. P." signifying Hot Pressed or smooth surface. Mostly used for Pen and Pencil Drawing.
"C. P." signifying Cold Pressed, or finely grained surface. Mostly used for Pencil Drawing and Water Color Painting.
"R." signifying Rough, or coarsely grained surface. Used for bold Water Color Painting.

```
No._ Size Per Per Per Per Per Per
3000 Cap, H. P. and C. P. ........13\times17
    Demy, H. P. and C. P....... 15\times20
    Medium, H. P. and C. P. ..... 17\times22
    Royal, H. P., C. P. and R. ...19\times24
    Super Royal, H. P. and C. P.. 19x27
    Imperial, 72tb, H. P., C. P.
    and R....................... . 22\times30
    Atlas, H. P. and C. P......26x34
    Double Elephant, H. P., C.P.
    and R. ............................46x40
    Antiquarian, H. P. and C. P... 31\times52
```


## EXTRA HEAVY

No.
3001 Imperial, 901 t , H. P., C. P.
and $R$. ...................22×30
Imperial, 140tb, H, P., C. P.
and R. $\ldots \ldots \ldots \ldots \ldots . . . . .22 \times 30$
Imperial, $300 \mathrm{tb}, \mathrm{C} . \mathrm{P} . . . .22 \times 30$
Double Elephant, 260 th, C. P. $26 \times 40$

## FINE DRAWING PAPERS

## For Draftsmen, Engineers, Colleges and Schools

No. 3004 "HERMES," a first quality Drawing Paper, extra heavy, Smooth surface, especially adapted for mechanical drawing, pen and ink and fine pencil drawing, of excellent erasing quality and great toughness.


No. 3006 "COSMOS" Drawing Paper. Made of pure stock, and carefully sized, with perfect erasing qualities, medium grained surface. A most desirable paper for schools and colleges, suitable for pencil, ink or water-color work.


No. 3008 "PHENIX" Drawing Paper, a very desirable white drawing and water-color paper of surface slightly grained, for school use.


Sample book of drawing and tracing papers cheerfully sent on request to schools and colleges, drawing rooms and to the profession, generally.

## F.WEBERCO. <br> P H I L A D E L P H I A St, Louis



## DRAWING PAPERS AND BOARDS (Continued)

## BUFF DRAWING PAPERS-in Sheets

No. 3012 "SPHINX," a hard, tough, Buff Drawing Paper, of superior quality, having a medium grained surface, excellent for ink or pencil work, unsurpassed erasing quality, light buff color, agreeable to the eye, and permitting of handling without soiling.


No. 3009 "CORPORAL," a tough Buff Detail Drawing Paper, medium grained surface, a trifle darker in shade than ordinary manilla paper, possessing good erasing qualities. Will take either ink or pencil.

| Size Inches | Per Sheet | Per Ouire | Per Ream | Size | Per Sheet |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $9 \times 12$. | Per Sheet | Per Quire | Per Ream | $22 \times 30$ | Per Sheet | Per Quire | Per Ream |
| $12 \times 18$. |  |  |  | $24 \times 36$. |  |  |  |

## CHARCOAL PAPERS

## P.M.F.-"Fabriano', Selected Charcoal Papers <br> In White and Thirteen Tints

| No. White | No. | No. |
| :--- | :--- | :--- |
| 0-Whep Gray | 14-Deep | 25 -Straw Color |
| 7-Medium Olive Green | 15-Gray | 26 -Light Blue Gray |
| 10-Pale Blue | 16-Dark Gray | 27-Light Fawn |
| 11-Deep Blue Gray | 18-Light Pink | 28-Dark Fawn |
| 12 -Medium Gray | 24-Dark Brown |  |

Sheets permanently tinted and will not bleach out. P. M. F. "Fabriano" Charcoal Papers are noted for their fine charcoal surface, texture and beautiful tints. May, also, be used successfully for water colors. Samples on request to Artists and Schools.

Per Sheet Per Quire Per Ream
Size, $19 \times 25$ inches
FRENCH AND DOMESTIC CHARCOAL PAPERS


## COVER PAPERS

No.
In sheets, $22 \times 28$ inches, in 16 different colors, used for Book and Magazine Covers; also for Water-Color Painting, Pastel and Charcoal and Crayon Drawing.

$$
\text { Per sheet . . . . . . . . Per } 100
$$

## JAPANESE WATER-COLOR AND TRACING PAPER

[^12]
## DRAWING PAPERS AND BOARDS (Continued)

## STRATHMORE DRAWING ROARDS

No. 3013 A Superior Quality of Bristol Drawing Board, made in two finishes: Smooth or high surface for Pen and Ink Drawing, and Medium or dull surface for Pencil, Pen and Water-Color Work, in 2, 3, 4 and 5 sheet thickness. Each Board is corner stamped "Strathmore Drawing Board."

Size, inches, $23 \times 29$
Each Per 100

| 3013-8 | 2 | Sheet | Smooth |
| :--- | :--- | :--- | :--- |
| 3013-7 | 2 | " | Medium |
| 3013-11 | 3 | " | Smooth |
| 3013-10 | 3 | " | Medium |
| 3013-13 | 4 | " | Smooth |
| 3013-12 | 4 | " | Medium |
| 3013-14 | 5 | " | Smooth |
| 3013-15 | 5 | " | Medium |

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$ 3013-15 5 . $\quad$ Medium

4-ply and 5-ply, 25 sheets in a package. Samples on request to Artists, Draftsmen, Schools and Colleges.


## PATENT OFFICE BRISTOL BOARDS



## DOMESTIC BRISTOL BOARDS

Smooth Surface for Pen and Ink

| No. |  | Size <br> $22 \times 28$ | Per Sheet Per Doz. |
| :---: | :---: | :---: | :---: |
| 3015-2 | 2-ply | $\cdots .22 \times 28$ |  |
| 3015-3 | $3 \%$ | 22x28 |  |
| 3015-4 | $4^{\prime \prime}$ | $22 \times 28$ |  |

## CHAMOIS BOARDS



## DRAWING PAPERS AND BOARDS (Continued) <br> WEBER SPHINX ILLUSTRATORS' BOARDS

No.


MOUNTED HAND-MADE PAPERS, ON HEAVY BOARD

| No. <br> 3024-C | "Fabriano" | Cold Pressed medium surface |  | Per Sheet Per Doz. |
| :---: | :---: | :---: | :---: | :---: |
| 3024-H | abriano, | Hot Pressed, smooth | $\begin{aligned} & 22 \times 30 \\ & 22 \times 30 \end{aligned}$ |  |
| 3024-R | " | Rough | 22x30 |  |
| $3025-\mathrm{C}$ | Whatman, | Cold Pressed, medium surface | . $22 \times 30$ |  |
| $3025-\mathrm{H}$ |  | Hot Pressed, smooth ....... | . $22 \times 30$ |  |
| 3025-R | " | Rough ............. | . $22 \times 30$ |  |
| 3026-C | " | Cold Pressed, medium surface | . $26 \times 40$ |  |
| $3026-\mathrm{H}$ | . | Hot Pressed, smooth ....... | . $26 \times 40$ |  |
| 3026-R | " | Rough ............. | .26x40 |  |

## MOUNTED BRISTOL BOARDS For High-Class Photo-Engraving



## COQULLLE BOARD

An Excellent Board with Fine Stippled Surface for Water-Color Painting
 Per Sheet Per 100

## MOUNTING BOARDS



THE "ACME" MOUNTING BOARD
A Cheap White Board for Ordinary Mounting Purposes
No.
3028 10-ply
Size Per Sheet Per 100

SHOW CARD BOARDS
3031 8-ply, in white and fifteen colors. Excellent for show cards. Take color well.
Size

$22 \times 28 \ldots \ldots \ldots . . \ldots$ Per Sheet Per $100 |$| Size |
| :--- |
| $28 \times 44 \ldots \ldots$ | Per Sheet Per 100

Sample Book on Request to Artists, Schools and Studios

DRAWING PAPERS AND BOARDS (Continued)

## TINTED CRAYON PAPERS

No. Fine Variety of Tints Size Per Sheet Per Quire 3032 English Imperial, machine made, assorted tints .... $21 \times 30$

See also Cover Papers, page 166

## ALABASTER PARCHMENT PAPER

## (Imitation Vellum)

For Illuminating, Engrossing Documents, Diplomas, Book Covers, Etc.

3033-H Heavy . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1919 $1925 \frac{1}{2}$
ENGLISH PARCHMENT
Genuine Sheepskin. In Sheets
For Illuminating, Engrossing Documents, Diplomas, Book Covers, Etc,
No. Size Per Sheet Per Doz.

3034-S $14 \times \mathrm{x} 18$ inches
3034-M 16x20 "
$3034-\mathrm{L} \quad 18 \times 24$ "

## GENUINE VELLUMIN SHEETS

For Illuminating, Engrossing Documents, Diplomas, Book Covers, Etc. ${ }_{3034 \frac{1}{2}-S ~ G e n u i n e ~ V e l l u m, ~ i n ~ s h e e t s ~ . ~ . . . . . . . . . . . . . . . . . . . . . . . . . . . ~}^{\text {Nize }} 17 \times 22$


## IVORY IN SHEETS



## GOLD AND SILVER PAPER



## 

## DRAWING PAPERS AND BOARDS (Continued) <br> ROSS BOARDS

## ROSS' RELIEF HAND-STIPPLE DRAWING PAPERS

For Photo-Engraving and Litho Transferring
By rubbing the pencil or crayon over the surface of the paper the picture is formed in stipple, in light and shade at the will of the Artist. High lights can also be erased by means of a knife.


No
1
1 Embossed, fine stipple, $11 \times 14,14 \times 22$ and $22 \times 28$ in.
$11 / 2$ Embossed, medium stipple, $11 \times 14 \mathrm{in}$. and $22 \times 28$ in.
3 Embossed. coarse and fine stipple combined, $11 \times 14,14 \times 22$ and $22 \times 28 \mathrm{in}$.
4 A Embossed, square cross-line, $11 \times 14$ and $14 \times 22$ in.
4 B Black over embossed square line, $11 \times 14$ in. Embossed grain, $14 \times 22$ in.
basket pattern, $14 \times 22$ in.
Black ruling printed on steel, $14 \times 22$ in
8 Embossed very fine stipple, $11 \times 14 \mathrm{in}$.
9 Very fine stipple, $11 \times 14$ in.
Black line one way and embossed across, $14 \times 22$ in.
Embossed cross-lines, $14-22$ in.
printed, $14 \times 22$ in.

No. ${ }_{12}$ 12 Fine black Jines one way and embossed across, $11 \times 14 \mathrm{in}$.
Crayon and stipple combined, $14 \times 22$ in.
Printed crayon tint, $14 \times 22$ in. $14 \times 22$ in
Embossed dimond stipple, $11 \times 14$ in.
Very fine printed lines, $11 \times 14 \mathrm{in}$.
Embossed lines, $11 \times 14$ in.
Very fine printed cross-lines, $11 \times 14$ in,
Very fine black lines one way, $14 \times 22$ in
" " " " " embossed across, $14 \times 22 \mathrm{in}$.
Printed lines and crayon, $14 \times 22$ in.
$14 \times 19$ in.

PRICES

No.
03035-S 11 x14 inches, per sheet,

No.
$03035-\mathrm{M} 14 \times 22$ inches, per sheet, $22 \times 28$ inches, per sheet,
No..
03035-C Sample Card, showing all numbers, postpaid

## SCRATCH BOARD

White Bristol Board Prepared With Clay Preparation for Pencil, Crayon and No.. Ink Work. High Lights May be Scratched Out With Knife
03036 Heavy, $22 \times 28$ inches $\qquad$ Per sheet,

## With Portfolio Cover



Handsomely bound and finished. Each block containing 24 sheets selected hand-made "Fabriano" paper. Made in three surfaces. Each block numbered,

## No. 3370

| Hot Pressed | Cold Pressed | Rough | Size |  | Price, Each |
| :---: | :---: | :---: | :---: | :---: | :---: |
| No. | 500 | 510 | $3 \frac{1}{2} \times 5 \frac{1}{2}$ | inches | Price, Each |
| 491 | 501 | 511 | $5 \times 7$ | " |  |
| 493 | 503 | 513 | $6 \frac{1}{4} \times 9 \frac{1}{2}$ | " |  |
| 494 | 504 | 514 | $7 \frac{1}{2} \times 11$ | " |  |
| 496 | 506 | 516 | $9 \frac{3}{4} \times 13 \frac{1}{2}$ | " |  |
| 497 | 507 | 517 | $11 \times 14 \frac{1}{2}$ | " |  |
| 498 | 508 | 518 | $12 \times 18$ | " |  |
| 499 | 509 | 519 | $15 \times 20$ | - |  |

## DOMESTIC 'FABRIANO'" SOLID SKETCH BLOCKS Without Portfolio Cover

Containing 24 sheets of the celebrated "Fabriano" Hand-made Drawing Paper. Made in three surfaces, viz.: "Hot Pressed" or smooth; "Cold Pressed" with a slight grain, and Extra "Rough," for Water-Color Painting. The paper is so compressed as to form a solid block. By running a knife around the edge, each sheet may be easily and individually detached.
No. 3371
Size
Each Size
Each
${ }_{3 \frac{1}{2} \mathrm{x}} 5 \frac{1}{2}$ inches . ................. $9 \times 12$ inches $\qquad$
4古x 6 " $\quad$....................
$10 \times 14$
$12 \times 18$. $\quad$..........................
$12 \times 18$
$15 \times 21$ "
$6 \times 9$
. $\quad . .$. ...................
$7 \times 10$
No. 3372 Extra Heavy, 140 Pound Stock


## "WHATMAN'S" SOLID SKETCH BLOCKS

Made of best quality WHATMAN'S Drawing Papers, in three finishes, viz.: Hot Pressed, or smooth; Cold Pressed, with slight grain, and extra Rough, for Water-Color Painting. The paper is so compressed as to form a solid block. By running a knife around the edge, each sheet can be easily detached.
No. 3373


## "WHATMAN'S" EXTRA HEAVY SKETCH BLOCKS

Made of WHATMAN'S best Imperial Drawing Papers, extra heavy (140) pounds), Hot Pressed, Cold Pressed and Rough.
No. 3374

| Size | Each | Size | Each |
| :---: | :---: | :---: | :---: |
| $5 \times 7$ |  | $10 \times 14$ |  |
| $7 \times 10$ |  | $15 \times 21$ |  |

"COSMOS" SKETCH BLOCKS Made of "Cosmos" Fine Quality Drawing Paper

No. 3375
Size
$5 \frac{1}{2} \times 7$ inches
$6 \times 9$
$7 \times 10$
$9 \times 12$

Each Size
$10 \times 14$ inches
$12 \times 18$ "
$14 \times 20$.

## "PHENIX" SKETCH BLOCKS

Made of "Phenix" White Drawing Paper. Substantially Bound, Green Edged, on Heavy Binders Board
No. 3376

| Size | Each | Per Doz. | Size |  | Each | Per Doz. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $5 \times 7$ inches |  |  | $9 \times 12$ | inches |  |  |
| $6 \times 9$ |  |  | 10x014 | " |  |  |
| $7 \times 10$ |  |  | $14 \times 20$ | " |  |  |

## DRAWING AND WATER-COLOR TABLETS <br> For School Use

No.
3377-2 "School," 20 leaves, bound along top, good quality white drawing $3377-1$ paper, paper cover. Size, $9 \times 12$ inches ........................ Each,
3377-1 "Student," 20 leaves, bound along top, fine quality white drawing paper and water-color paper, paper cover. Size, $9 \times 12$ inches $\qquad$ Each,

## "FABRIANO" CHARCOAL PAPER SKETCH BLOCKS White or Assorted Tints. Specify Which When Ordering

No. 3378



## DRAWING PAPERS AND BOARDS (Continued)

STIFE CANVAS-COVERED SKETCH BOOK


No. 3379
White Paper, Stamped on
Cover "Sketches."
Bound in Cloth Covers

Size
Each
$4 \times 7$ inches
6x 9 "........
9x11 " ........
10x14 " ........

FLEXIBLE CANVAS-COVERED SKETCH BOOKS
White Paper, Bound in Cloth Covers
No. 3380

| Size | Each | Size | Each |
| :---: | :---: | :---: | :---: |
| $3 \frac{1}{2} \times 5 \frac{1}{2}$ inches |  | $6 \times 9$ inches |  |
| $4 \frac{1}{2} \times 6$ " |  | $9 \times 12$ " |  |

PORTFOLIOS


No.
3385 Cloth back and corners and paper sides.
Sizes, inches ...10×14 $12 \times 16 \quad 14 \times 20 \quad 17 \times 22 \quad 20 \times 26 \quad 23 \times 31 \quad 27 \times 40$ Each
3387 Leather back and corners, cloth sides with three inside flaps.
Sizes, inches ...........12×16 $14 \times 20 \quad 17 \times 22 \quad 20 \times 26 \quad 23 \times 31 \quad 27 \times 40$ Each
Note.-Special Portfolios made to order.

## DRAWING PAPERS AND BOARDS (Continued)

## DRAWING PAPERS-in Rolls

## Please Do Not Fail to Specify Length of Roll Desired

3035 "METEOR", a moderate priced white Drawing Paper, medium weight, will not break in folding, of good erasing quality, suitable for pencil and ink work,

Per
Per Yd. 10-Yd. Roll
36 inches wide
In original rolls of about 35 to 40 ths., per th.,
3040 "AJAX," a high-grade white Drawing Paper of pure stock, finely grained surface, carefully sized, perfect erasing qualities. A most desirable paper for college and drawing room. Suitable for pencil, ink or water-color work, Medium weight.

Per
Per Yd. $10-\mathrm{Yd}$. Roll
30 inches wide
36

42 " "
In original rolls of about 50 tbs., per tb.,
3041 "AJAX," heavy.
62 inches wide
In original rolls of about 50 to 60 tbs., per th.,
3053 "JUPITER," a heavy, natural white paper with an egg-shell surface, a perfect paper adapted for general drawing either in lines or wash work, highly recommended for perspectives, elevations and all finished drawings.

Per Yd. $10-\mathrm{Yd}$. Roll
58 inches wide
In original rolls of about 50 to 60 tbs ., per tb.,
3055 "TIGER," a very hard, tough and excellent white drawing paper, splendid for map work. Fairly heavy. It has a hot pressed or smooth surface.

Per Yd. $\quad \begin{gathered}\text { Per } \\ 10-\mathrm{Yd} . \text { Roll }\end{gathered}$
30 inches wide
$\begin{array}{lll}36 & \text { ". } \\ 42 & \text { ". }\end{array}$

In original rolls of about 50 tbs ., per tb .,
3056 "TIGER," extra heavy, smooth.

STEINBACH'S PAPER
For Crayon Work and Solar Printing
306050 inches wide, thin, in $10,25,50$ and 100 yard rolls. ..... Per yard,
306150 " " thick, in 10, 25, 50 and 100 yard rolls Original rolls of about 140 tbs., per th.,
Sample book of Tracing and Drawing Papers cheerfully sent on request to Schools and Colleges, Drawing Rooms and to the Profession, generally.

## DRAWING PAPERS AND BOARDS (Continued)

No..
3070 Climax White Drawing Cloth. A prepared muslin of medium weight, very tough and opaque. Used frequently for map drawing. Will take ink, pencil, crayon and water color.

Per Yd. 10-Yd. Roll
30 inches wide
$\begin{array}{ll}36 & \text { " } \\ 42\end{array}$

## MOUNTED DRAWING PAPERS

Mounted on Best Quality Muslin. Carefully Stretched and Air Dried

3073 "SPHINX," for description see No. 3094.
24 inches wide
30 " $\quad$. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
36
42 «
60 " "

3075 "AJAX," for description see 3040.
30 inches wide $\qquad$
36
42
$3076 \quad 63$
heavy, see No. 3041
3083 "JUPITER," for description see No. 3053.
62 inches wide, egg shell, heavy

3085 "TIGER," for description see Nos. 3055, 3056.
30 inches wide
36
42
63 " "
30866
63 " " heavy

## MOUNTED FABRIANO, OR WHATMAN'S PAPERS

Muslin Backed. When Ordering Advise Whether Smooth, Medium or Rough Surface is Desired

Fabriano Whatman
No. $3089-\mathrm{F}$ No. 3089-W Per Sheet
Royal, 19x24 inches
Imperial, $22 \times 30$ inches
Double Elephant, 26x40 inches ..... .
Antiquarian, $31 \times 52$ inches ............

## DRAWING PAPERS AND BOARDS (Continued)

No.
Per Yd. Per 10 Yds .
3067 "S.HAGREEN," mat and water-color paper, rough sur-
face, white and buff.
58 inches wide
In original rolls of about 40 tbs ., per fb .,

## BUFF DETAIL DRAWING PAPERS

No.
3094 "SPHINX," a Light-colored Buff, Hard, Tough Drawing Paper, of the very highest quality, having a finely grained surface. Excellent for ink and pencil work, unsurpassed erasing qualities. Fairly heavy in weight.

Per Yd. $10-\mathrm{Yd}$ Per Roll $\quad \stackrel{\text { Per }}{50-\mathrm{Yd} \text { Roll }}$
24 inches wide

36 " " .........................................
42 " 42 ................................................
60 " " ............................................
In original rolls, of approximately 50 pounds, per pound,

No.
3091 "CORPORAL," Buff Detail Drawing Paper, medium weight, fine quality. Very tough and of high erasive quality, finely grained surface.


In original rolls of about 75 pounds, per pound,

No.
3090 "MANILLA," Detail or Pattern Paper, smooth surface, buff. Medium thick.
 Schools and Colleges, Drawing Rooms and the Profession, generally.

## TRACING PAPERS-in Sheets



## TRACING PAPERS-in Rolls

3116 "FORTUNA," buff tint, unprepared, manilla tracing.
40 inches wide
3117 "STANDARD," a natural unbleached Tracing Paper, for pen and pencil. Per yard, 43 inches wide
" 50 -yard roll, 43 inches wide
3118 "TAURUS," an unprepared, unglazed, white tracing paper, excellent for pencil detail work. Preferred by architects.

Per Yard Per Roll
20-yard roll, 57 inches wide $\qquad$


50 " " 57
$3118 \frac{1}{2}$ "TAURUS," glazed, 57 inches wide.
20 -yard roll
50
3120 "APOLLO," vegetable, thin, white, smooth, in rolls of 20 yards.
$28 \frac{1}{2}$ inches wide $\qquad$ 43

3121 "APOLLO," heavy, vegetable, white, smooth, in rolls of 20 yards.
43 inches wide
57

## TRACING PAPERS AND TRACING CLOTH TRACING PAPERS-in Rolls (Continued)

3124 "DIANA." glassine, very transparent, white, glazed, in rolls of 20 yards.
42 inches wide
$3126-\mathrm{V}$ "MARS," prepared, tough, transparent, white, in rolls of 20 yards.
30 inches wide
36 "
42 "
3129-V "IDEAL," prepared, heavy, transparent and strong, bluish tint, in rolls of 20 yards.
30 inches wide
36
42
3131 "HERCULES" PARCHMENT, prepared, smooth, very tough and transparent, in rolls of 20 yards.
Medium, 39 inches wide
3133 "UTILITY," medium weight, transparent, white Tracing and Detail Paper, for pen and pencil work, as well as water color. Will stand much erasing by knife or rubber and frequent folding. Frequently referred to as Detail Tracing Paper.

30 inches wide, 50 -yard roll


3134 "ORION" Bond Drawing and Tracing Paper, a very strong and tough paper, suitable for general office work. Will withstand much rough handling.
30 inches wide, 50 -yard roll
36 "̈ " 50
42 " " 50

## TRACING CLOTH

3135 "IMPERIAL," glazed on one side and dull on the other.
Per Yard Per Roll 30 inches wide, in rolls of 24 yards $\qquad$

| 36 | ". | ". | ". | ". | ". | 24 | " |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 38 | ". | ". | ". | ". | " | 24 | ". |
| 41 | ". | . | ". | .. | ". | 24 | ". |
| 48 | ". | . | . | . | . | 24 | " |

$\qquad$
$\qquad$
$\qquad$
$\qquad$
54 " " . " " 24 $\qquad$
3136 "SPHINX" Tracing Cloth.
30 inches wide, rolls of 24 yards
$\begin{array}{llllll}36 & \text { ". } \\ 42 & \text { " } & \text { " } & \text { " } & 24 & \text { " }\end{array}$

## TRACING CLOTH-in Sheets

Tracing Cloths in sheets furnished up to $41 \times 59$ inches with border lines, titles, diagrams, etc., printed or lithographed, absolutely opaque and indelible. Prices on request. The printing of Tracing Cloth is a specialty of ours.

Sample book of Tracing and Drawing Papers cheerfully sent on request to Schools and Colleges, Drawing Rooms and to the Profession, generally.



## POUNCE OR TRACING CLOTH POWDER

No. 3140 For removing the superfluous gloss on Tracing Cloth and other glazed surfaces, which often prevents inks and wate: colors from setting evenly.

Per box .... Per dozen ....

## INDIA INK ERADICATOR

Per Ounce Bottle

3141 Weber Erasing Liquid for removing waterproof India
Ink from Tracing Cloth $\qquad$

## TRACING CLOTH-COLORS

3142 "SPHINX," non-wrinkling liquid tracing cloth colors. For plans and wash drawings; will not wrinkle tracing cloth. Made in the following colors: Yellow (for brass), Green (for vegetation), Indigo (for wrought iron), Orange (for copper), Blue (for steel), Brown (for stone), Black (for cast iron), Brick Red and Carmine.
Price, per ounce bottle

## PLAIN TIN METAL TUBES

For Preserving Blue-Print Papers, Drawings, Etc.



3144-L For 50-Yard Rolls
Size, $4 \frac{1}{2} \times 31$ inches
........ Each,

| " | $4 \frac{1}{2} \times 37$ |  |  |
| :--- | :--- | :--- | :--- |
| " | $4 \frac{1}{2} \times 43$ | " | $\ldots \ldots .$. |

$\begin{array}{llll}\text {.. } & 4 \frac{1}{2} \times 43 \\ 4 \frac{1}{2} \times 55 & \text { ". } & \ldots \ldots \ldots & \text {." }\end{array}$

JAPANNED TIN METAL TUBES
3145 Diameter in inches
Length
4
25
4
31
4
37
4
Each


## "Sphinx" Profile and Cross-Section Papers and Cloth

## PROFILE PAPERS

Our Cross-Section and Profile Papers are printed on highest grade tough drawing and tracing paper, especially made for this purpose. The lines are very distinct and divisions absolutely accurate. Our Cross-Section and Profile Tracing Cloths are "Imperial" Tracing Cloth.


Plate $A, 4 \times 20$ to the inch

## CONTINUOUS




Plate B, $4 \times 30$ to the inch

## CONTINUOUS

| N | Per Yard |  |  | Per Roll |
| :---: | :---: | :---: | :---: | :---: |
| 3286-G | Green, engraving 20 in . wide, Drawing Paper, |  | 11. |  |
| 3286-O | Orange, engrvg, 20 in . wide, Drawing Paper, | 50 |  |  |
| 3287-G | Green, engraving 20 in . wide, Muslin Backed, | 20 | " |  |
| 3287-O | Orange, engrvg. 20 in . wide, Muslin Backed, | 20 | " |  |
| 3288 | " engraving 20 in . wide. Tracing Paper, | 50 | " ${ }^{\text {a }}$ |  |
| 3289 | 4 " 20 in . wide, Imper. Trcg, |  |  |  |
|  |  | 20 |  |  |

## CROSS-SECTION PAPERS (Continued)



Plate F, 10x10 to the inch. Inch lines heavy SHEETS

Per Sheet Per Quire
No.
3302-G Green, engraving $16 \times 20$ inches, Drawing Paper $3302-0$ Orange, engraving $16 \times 20$ inches, Drawing Paper 3302-T ". only, engraving $16 \times 20$ inches, Tracing Paper,

CONTINUOUS Per Yard
No.
$3303-$
3303 -
Orange, engrvg. 20 in . wide, Drawing Paper, $3304-\mathrm{G}$ Green, engraving 20 in . wide, Muslin Backed, 3304-O Orange, engrvg. 20 in. wide, Muslin Backed, 3305 " engraving 20 in . wide, Tracing Paper, 3306 " " 20 in. wide, Imperial Trac-
ing Cloth

$$
20 \text { in. wide, Imperial Trac- }
$$



## Millimeters

Metric in millimeters, with each fifth millimeter, each centimeter, and each decimeter proportionately heavier than the millimeters.

3295-G Green, engraving 50 cm . wide, Drawing Paper ........................................................ 50 d, roll,
3295-O Orange, engrvg. 50 cm . wide, Drawing Paper, $3295 \frac{1}{2}$ Orange only, engraving 50 cm . wide, Tracing Paper

3296-G Green, engrvg. 50 cm . wide, Muslin Backed.
3296-O Orange, engrvg. 50 cm . wide, Muslin Backed, 20 " "
32963 $\frac{1}{2}$ Orange only, engraving 50 cm . wide, on $\mathbf{I m}$ perial Tracing Cloth

## SHEETS

3297 Green, engraving $40 \times 50 \mathrm{~cm}$., Drawing Paper 3297-T Orange, engraving $40 \times 50 \mathrm{~cm} .$, Tracing Paper ........

## CROSS-SECTION PAPERS (Continued)



Plate $\mathrm{H}, 16 \times 16$ to the inch

## SHEETS

## SKETCHING CROSS-SECTION PAPER


$20 \times 20$ to 1 inch. Every fifth line heavy

## SHEETS

3314 Olive Green, engraving on Onion Skin Tracing Paper, sheets $8 \frac{1}{2} \times 12$ in,, engraving $7 \frac{1}{2} \times 10$ in. ...
3312-M Divided in millimeters, engraving $20 \times 25 \mathrm{~cm}$., heavy paper

## FWEBERCO $P$ H I L A D E L P H I A ST. LOUIS BALTIMORE

RULED CROSS-SECTION PAPERS

$8 \times 8$ to the inch
Sheets, $16 \times 21 \mathrm{in}$., ruled in blue

> Per Sheet Per Quire

$10 \times 10$ to the inch
No
3317 Sheets, $16 \times 21$ in., ruled in blue ...........

$5 \times 5$ to 1 inch
Per Sheet Per Quire
Per Ream
No.
Sheets, $16 \times 21$ in., ruled in blue ...........


Per Ream
3319 Topographical Paper, in sheets, $16 \times 21$ in., ruled $4 \times 4$ to inch; inch lines blue, rest red, Samples of Cross-Section Papers Sent on Application

## ISOMETRIC SKETCHING PAPER

For Making Drawings and Sketches in Isometric Perspective


No.
Per Sheet Per Quire
3320-A Printed in faint Blue, sheets $12 \times 18$ inches . . . . . . . . . . .
3320-B " " " $"$ pads of 40 sheets, $6 \times 9$ in.......... Each,
3320-C " " " " " " 40 " $9 \times 12$ " ..........

SCHOOL CROSS-SECTION OR CO-ORDINATE PAPER Metric


No.
Per Sheet Per Quire Per Ream
$332118 \times 24 \mathrm{~cm}$. ( $7 \frac{1}{8} \times 9 \frac{3}{8}$ inches), printed in green. .
3322 Quadrille ruted pads, $9 \times 12$ inches. Yellow paper ruled $4 \times 4$ to inch in faint blue. Bound two sides. Used for sketching and in estimating. Each,


Logarithmic Paper is so ruled that the scales in each direction are logarithmic instead of uniform, as on other cross-section papers; the numbers and divisions marked are placed at such points as to make their distances from the origin proportional to the logarithm of such numbers instead of to the numbers themselves. By means of this paper logarithmic operations are performed graphically, without reference to the logarithms themselves. Many hydraulic and other engineering computations are facilitated by its use, and various relationships (sizes of tie-bars, shafts, etc., in terms of varying load, or the inverse; circumferences and diameters of circles in terms of their radii or diameters, or the inverse; weights of the series of bodies of the same substance and form, but of varying size, or the inverse, etc., etc.), can be represented.

## GRAVES' PRACTICE LETTERING SHEETS



No. 3327 Graves' Lettering Sheets supply a long-felt want among Instructors in Lettering at High Schools and Colleges. Printed in pale blue on highgrade paper, with spaces conforming to standard inclined free-hand lettering.

## ENGINEERS' FIELD BOOKS

Bound in Extra Fine Durable Leather Covers, Round Corners. Bound Flush. Ruled with Waterproof Ink. Tough Paper and Containing Improved Tables, Bound in.


Nos. 3330-3331
Left page horizontal lines blue, vertical lines red. Right page all lines blue, but middle line red.

No.
3330
3331
Field Book, $4 \frac{1}{4 \frac{1}{2} \times 7 \frac{1}{2}}$ inches, 80 leaves, smooth paper
15 Pages of Improved Tables Bound in Back of Each Book


Nos. 3335-3336
Horizontal ruling blue. Vertical ruling red.
Level Book, $4 \frac{1}{4} \times 7 \frac{1}{2}$ inches, 80 leaves, smooth paper


## ENGINEERS' FIELD BOOKS (Continued)



Nos, 3340-3341
Horizontal ruling blue. Vertical ruling red.
No.
3340 Transit Book, $4 \frac{1}{2} \times 7 \frac{1}{2}$ inches, 80 leaves, smooth paper ............. 3341

$$
\because \quad 4 \quad 4 \frac{1}{2} \times 7 \frac{1}{2} \quad 60
$$


Ruled in blue, inch lines heavy.


Nos. 3345-3346. Ruled $10 \times 10$ to 1 inch
Ruled in blue, inch lines heavy.

3345 Cross-Section Book, $4 \frac{1}{2} \times 7 \frac{1}{2}$ inches, 80 leaves ....................... 3346 " " " $7 \times 8 \frac{1}{2}$ " 80 " 15 Pages of Improved Tables Bound in Back of Each Book

We make to order any other style of Field and Cross-Section Books.


## "SPHINX" LOOSE-LEAF FIELD BOOKS

## For Engineers and Surveyors

These books are made to meet a popular demand. Built for service, durability and appearance.
No.
Eacb
3330-A $4 \frac{1}{2} \times 7 \frac{1}{2}$ inches, Field Book, complete with filler
3335-A $4 \frac{1}{2} \times 7 \frac{1}{2}$ ". Level Book, complete with filler
3346-A 412x $7 \frac{1}{2}$ ". Transit Book, complete with filler
3345-A $4 \frac{1}{2} \times 7 \frac{1}{2}$ " Cross-Section Book, complete with filler $\qquad$

The covers are stiff, covered with heavy leather and are equipped with three I.-P. Patent Release Rings to hold the fillers.

All fillers contain 60 leaves of very tough bond, neatly ruled and measure $4 \frac{1}{3} \times 7 \frac{1}{2}$ inches. Ruling is standard and as shown in our Catalogue under Nos. $3330,3335,3340$ and 3345.

Separate Fillers, Each

## "SPHINX" DUPLICATING FIELD BOOKS

Bound in durable, leather covered stiff backs, containing 80 leaves, $4 \frac{1}{2} \times 7 \frac{1}{2}$ in., numbered, and 80 duplicate leaves also numbered. The original sheets are perforated and punched and may be extracted for separate filing in binder or filing case.

These books are largely used by railroad engineers.
No.
Each
3330-D
3345-D
3350 Simple Ring Binder with two stiff, cloth-covered backs, for extracted original sheets

## CROSS-SECTION BLOCKS

Ruled Cross-Section Blocks, ruled in blue, on good quality paper, 10×10, $8 \times 8,4 \times 4$, or $5 \times 5$ to one inch; inchl lines heavy. Bound two edges.

## 50 Sheets to Each Block

No.
3358-A $5 \times 8$ inches
3358-B $8 \times 10$ "
3358-C 10×16"


## PERFORATED CROSS-SECTION TABLETS



Ruled in blue, on good quality paper, $10 \times 10$ to one inch; inch lines heavy.

80 Leaves to Each Tablet

No. Each
$041485 \frac{1}{4} \times 8$ inches .................
$0418261 \times 9$ ". 9 ..............
$0418473 \times 10^{3}$

## STANDARD DOCUMENTS

## For Architects and Builders

The Standard Documents of the American Institute of Architects replace the old Uniform Contract, which is discontinued and cannot be furnished.

No.
$\begin{array}{lll}3360-1 & \text { Agreement and General Conditions ........... } 100 & \text { Per Each, } \\ 3360-2 & \text { General Conditions without }\end{array}$
3360-2 General Conditions without Agreement ...... " "
3360-3 Agreement between Contractor and Owner ... " "
3360-4 A Agreement between Architect and Owner, on the Percentage Basis .......................
3360-4 B Agreement between Architect and Owner, on the Fee Plus Cost System ...................
3360-5 Bond of Suretyship ............................... .
3360-6 Agreement between Contractor and Subcontractor ........................................
3360-7 Letter of Acceptance of Subcontractor Proposal, 3360-8 Complete Set, consisting of one each Nos. 3360$1,5,6,7 \ldots \ldots \ldots \ldots \ldots$. Per 100 sets, Set,
A heavy paper cover, on which valuable explanatory notes are printed, is given with each copy of the Agreement and General Conditions and with each Complete Set of the documents.

## ARCHITECTS' CERTIFICATE BOOKS

No. 3361100 blank forms with stubs, bound in flexible linen. Each,

## FWERERCO P H I L A D E L P $\quad \mathrm{H}$ I I A <br> ST. LOUIS BALTIMORE

## Blue Print Materials

## BLUE PRINT PAPERS

Our Blue Print Papers are unexecelled for quality. They are well-sized and calendered to take the preparation evenly on the surface.

Your special attention is drawn to the fact that all our Blue Print Papers and Cloth, are always prepared fresh on receipt of order, and we use only the purest chemicals.

The improved style of packing which we adopted recently will keep the paper airtight, it being thus kept fresh for an unusually long time.

## PRINTING SPEEDS

Your attention is earnestly directed to the various printing speeds in which we prepare all Blue Print Papers.
"Rapid" Printing requires an exposure of about 1 minute in sunlight. Paper 50 prepared keeps fresh indefinitely.
"Electric" or "Extra Rapid" Printing is especially prepared for quick sunlight or arclight exposure. In sunlight 30 to 45 seconds; under the arc, usually 40 seconds suffices for good results. The paper keeps well, but must be kept rolled and wrapped and in a dark, dry place.
"Extra Electric" Printing. Almost instantaneous. Too quick to be handled in sunlight and requires but 20 seconds arclight exposure. Keeps fresh, if properly handled, for three months in winter. During the summer it should not be stocked for longer than one month. More than can be used in this period should not be ordered. Especially prepared for shop work-for large industries requiring quick service of their blue printer.

## "NEPTUNE" PAPERS

This brand of Blue Print Paper is the best and strongest we manufacture. The stock is 100 per cent. rag, very tough and durable. Will stand much handling and is ideal for permanent record filing.
"NEPTUNE"-Thin-Basis Folio 16 tbs.

## Excellent for Mailing Purposes



$$
\text { "NEPTUNE"-Medium-Basis Folio } 24 \text { tbs. }
$$

## BLUE PRINT MATERIALS (Continued)

# "ECLIPSE" AND "STAR" BLUE PRINT PAPERS 

## Guaranteed 100 Per Cent. Pure Rag

These brands are first-class papers for general employment, Strong and tough, they withstand much handling and serve well as records.
"ECLIPSE"-Medium Weight-Basis Folio 24 tbs .


## "AURORA" BLUE PRINT PAPER

Prepared for general use. Excellent for shop prints. Strong enough to stand a good deal of handling. So-called 50 per cent. rag stock,
"AURORA"-Medium Weight-Basis Folio 24 tbs .
No. Widths, in inches .............................. 30 . 42
3195 Prepared, 10 yard roll
3196 " 50 " "

## "CLIMAX" BLUE PRINT CLOTH

$$
\text { Medium Weight-. } 005 \text { inches thick }
$$

No. Widths, in inches ............................... 30 . 42
3230 Prepared, 10 yard roll
3231 " 50 " " ...............................
Unprepared, see No. 3070 drawing cloth, page 175.
NOTE.-In ordering Prepared Blue Print Paper, please specify whether the Rapid, Electric or Extra Electric Speed in Printing is desired

## BLUE PRINT MATERIALS (Continued)

## "SPHINX" BLUE PRINT RESTORER

Sphinx Blue Print Restorer especially serves to make perfect prints, with sharp white lines and a deep blue color, in connection with Sensitized Blue Print Paper, which has deteriorated somewat by age or exposure to air or dampness. It also makes clear prints with sharp white lines and a deep rich blue color of prints that have been over-exposed. Freshly sensitized paper, therefore, by a little over-exposure will, by using the Sphinx Blue Print Restorer, produce sharper white lines and a deeper blue color than otherwise. Full directions accompany each package.

SPHINX BLUE PRINT RESTORER
Per pound,

No.
3244 BLUE PRINT VARNISH, specially prepared for varnishing Blue Prints. Per pint
3245 ERASING FLUID, for making alterations and additions on Blue Prints. Per ounce bottle
3246 BLUE PRINT INKS, for marking on Blue Prints, in three colors, red, white, yellow. Per ounce bottie

## "SPHINX" BROWN PRINT PAPER AND CLOTH

Gives a Print of original tracing, white lines on brown-black background. As these prints are opaque to light, they can, when made on Thin Sphinx Brown Print Paper be used as negatives from which any number of positive prints can be taken.
No.
3224 "SPHINX," Brown Print Paper Thin for Negative Prints. Widths, in inches

Per 10 -yard roll
$3_{3228-\mathrm{S}}^{3228-\mathrm{S}}$ "SPHINX" Fixing Salt, for Brown Prints ........... Per pound, 3228-S

NOTE--Every roll of "Sphinx" Brown Print Paper and Cloth is accompanied by sufficient Fixing Salts for developing.

## BROWN PRINT ERASING FLUID

3247 A preparation to be used on Brown Prints for the purpose of erasing, or making alterations Per ounce bottle,

## BLUE PRINT MATERIALS (Continued)

## F. WEBER CO.'S AMERICAN-MADE "SPHINX" DIRECT BLACK-LINE PAPER

Water Bath Process

Only paper of its kind made in America. By an improved process our paper is made to do quicker printing than the imported; at the same time giving clear, sharp definition and black lines. It will print in sunlight, or in the electric frame as quick as brown print paper.

One bath in water alone is necessary, and the paper requires no more attention than ordinary blue print paper.

Used in connection with a positive (ordinary tracing) another positive is produced direct, with sharp black lines on clear white background. It, therefore, becomes unnecessary to first make negatives with brown print paper to produce line prints.

In 10 -yard rolls, medium weight, 42 inches wide.
No.

```
3236 10-yard roll
    . ................................................... . . Per roll,
3237 50
```

NOTE.-Working samples to Drawing Rooms, Blue Printers and Colleges cheerfully sent on request.

## "SPHINX" BLACK-LINE CLOTH

No.
3240 Black Print Cloth, per roll of 10 yards, 42 inches wide ...........

## PRINTS MADE OR TRACINGS COPIED

Our Blue Print Department being fitted with the most up-to-date appliances, we are in a position to turn out blue, brown and black prints and negative prints on shortest notice.
No..
Per Sq. Ft.
3232-P White Lines on a Blue Ground or "Blue Prints" on paper .....
3232-C " " " " " " " " climax cloth,
3233-P Blue Lines on White Ground from "Sphinx" Brown Print Paper Negative
3233-C Blue Line on White Ground on climax cloth from "Sphinx" Brown Print Paper Negative
....................................
3234-P NEGATIVE or POSITIVE PRINTS on "Sphinx" Brown Print Paper
3234-C NEGATIVE or POSITIVE PRINTS on "Sphinx" BrownPrint Coth
3235-P Direct Black Line Prints, from Tracings on "Sphinx" Direct Black Line Paper, waterbath process
3235-C Same on "Sphinx" Direct Black Line Cloth Small prints 1 sq. ft . or under at price of 2 sq . ft .

FWEBERCO $P$ H I L A D E L P $\quad$ H I A

BLUE PRINT MATERIALS (Continued)
BLUE PRINT SUN FRAMES
Made of Hard Wood, Well Finished with Mountings


QUALITY A
Frames constructed of selected oak, finished three coat golden oak, with backs of pine, painted black. Corners dovetailed. Oil-tempered steel springs, special bar catches, which can be rapidly operated without bruising the fingers. Metal parts finished in black baked enamel.

| No. | Size | $\begin{aligned} & \text { Frame Only } \\ & \text { Each } \end{aligned}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3250 | $.20 \times 24$ |  | $\begin{aligned} & \text { No. } \\ & 3250-\mathrm{F} \end{aligned}$ | Size $20 \times 24$ | Each |
| 3251 | 24x30 |  | 3251-F | $24 \times 30$ |  |
| 3252 | 25x37 |  | 3252-F. | . $25 \times 37$ |  |
| 3253 | $30 \times 42$ |  | 3253-F. | . $30 \times 42$ |  |
| 3254 | . $36 \times 48$ |  | 3254-F. | . $36 \times 48$ |  |
| 3255 | $36 \times 60$ |  | 3255-F. | $36 \times 60$ |  |
| $3255 \frac{1}{2}$ | $42 \times 60$ |  | 325512-F | $42 \times 60$ | . |
| $3255 \frac{3}{4}$ | $42 \times 72$ |  | 32553-F | $42 \times 72$ |  |

Shipping Weight of Quality A Frames, without glass, is about 10 pounds per square foot; plate glass, $3 \frac{1}{2}$ pounds per square foot.

Note.-We prefer to sell Sun Blue Print Frames without glass, on account of breakage in shipment and added transportation charges by reason of great weight. Customers will be able to buy glass locally at standard prices. Of course, if desired, we will supply it at current prices.

## F.WEBEERCO.

# BLUE PRINT MATERIALS (Continued) QUALITY B SUN FRAMES 



These Frames are made of white wood, well made and shellac finished, with locked corners. Oil-tempered steel springs, spring brass catches. Their lightness is a good feature, as they can be easily handled.
No.
With Pad
U
".
".
".
".
"

BLUE PRINT BATH TRAYS
Heavy Galvanized Metal
With Drain Pipe, Strongly Wired Rim and Angle Iron Feet


No.
3260
3261
3263
3265
3266

Two inches deep .................................................20x24 20
" " "
" and one-half inches deep ....24×30
.. and one-half inches deep ..................................30x42
.. .. .. .. .. ................................ 36x60
$42 \times 60$

ELECTRIC BLUE PRINTING, WASHING AND DRYING MACHINES
Ouotations Cheerfully Furnished on Request on Standard Equipment


## SPRING CLIPS

$\mathrm{N}, \mathrm{O}$
3248
3248 For clamping Blue Prints
when drying .............
Each Per Doz,
$3248 \frac{1}{2}$ White Pencils, for marking on Blue Prints .

## No. $3247 \frac{1}{2}$ WEBER TRANSPARENTIZING LIQUID

Applied to drawings on detail, drawing and tracing papers, it immediately transparentizes them, making them fit for blue printing. Also renovates old tracings and is used extensively on brown print negatives.

In cans, per pint, Per quart, Per gallon,

# Drawing Instruments 

## RIEFLER PATENT GERMAN-SILVER DRAWING INSTRUMENTS

## VERY HIGHEST QUALITY (Precision Grade)

Original Round System

F. WEBER CO., Sole Agents

Nearly fifty years ago we introduced Riefler's Patent Round-System Drawing Instruments in this country. It is very gratifying now for us to state that they have not only overcome every prejudice brought into the field against them by manufacturers of other systems, but have made such great progress by reason of their most practical and ideal form of construction and their excellence of quality, that professors of the many colleges where they have been adopted, as also draughtsmen who use them, give them the highest praise and endorsement.

A detailed description of the System would seem almost superfluous, and we therefore confine ourselves, in the description that follows, to some of the most important points, which demonstrate the superiority of construction.

The superiority of the Round System is further manifested by the many imitations that have sprung up since the introduction, by us, of the original Riefler. These imitations cannot be compared in quality and workmanship to the Riefler's, and in order to protect our patrons against such, we have stamped every genuine Riefler's Instrument with our initials, "F. W. Co."


## DESCRIPTION

1. The heads of all Dividers are clamped by a Pivot joint and extend partly along the shanks. This gives the legs greater firmness and enables the draughtsman to draw with greater accuracy the smallest circles with the largest Dividers.
2. The legs of the Dividers are cylindrical, thereby giving greatest strength and are more pleasant and convenient to handle than the old style, with sharp edges.
3. The steel Points of the Dividers are cone-shaped and are screwed in in a slanting direction, converging toward the axis of the Dividers when the latter are closed. These points can be replaced by new ones at a trifling expense when worn out or broken,
4. The Pinions of the Pen, Pencil and Needle Point parts, also of the Lengthening Bar, are cylindrical and are split to give them elasticity. They fit with a slight taper into corresponding sockets. A slot is cut longitudinally on one side of each socket, which insures a close fit and a certain flexibility. A wedge attached to each pinion fits into this slot to hold the respective part in its position. The screws to hold the different parts, as on most other systems, are hereby made superfluous. Another great advantage, the construction of these instruments has, is that any part of them, having been lost or dam-
aged can be replaced by a new one, which will fit the remaining part aged, can be replaced by a new one, which will fit the remaining part
as if it had been especially made for it.


The best steel is used for all steel parts and personal attention of expert shop foremen given to every Ruling Pen is a sufficient guarantee of their excellent quality.

We beg to draw attention to Instruments Nos, 3490 and 3491 Spring Bow Pens, Nos. 3552, 3553 and 3554 Patent Cross-Joint Ruling Pens and 3561 Fountain Ruling Pen, which are novel in their construction and unsurpassed in usefulness and practicability.

From time to time we receive back a set of Riefler Drawing Instrumests for repair and cleaning, which has been in use for more than 25 years. In many such cases where the innecessary only to resharpen the pens.

DRAWING INSTRUMENTS (Continued)

## RIEFLER ROUND SYSTEM DRAWING INSTRUMENTS

Superfine Quality, Best German Silver and English Steel

All Genuine Riefler Instruments are Stamped "Riefler" and "F. W. Co."


No.
3400 Compass, $3 \frac{1}{2}$ inches, with fixed Pencil and Needle Point ..........
3402 " $3 \frac{1}{2}$ " " $\quad$ Pen and Needle Point ............
3406 " $3 \frac{1}{2}$ " like No. 3408, with Hairspring ............... . .
3408 " $3 \frac{1}{2} \quad$ with fixed Needle Point, Pen and Pencil parts
and Lengthening Bar
3416 Plain Divider, $3 \frac{1}{2}$ inches, Round Steel Points $\qquad$
3417 Hairspring Divider, $3 \frac{1}{2}$ inches, Round Steel Points $\qquad$

All pens furnished with upper spring blade. (Prices for separate parts of Instruments on application.)

## DRAWING INSTRUMENTS (Continued)

## RIEFLER ROUND SYSTEM

All Genuine Riefler Instruments are Stamped "Riefler" and "F. W. Co."
o. 3418 No. 3420


No. 3423


No. 3424
No.
3418 Plain Divider, 53 inches, Round Steel Points
3418 A " " $\quad 5 \quad 5 \frac{3}{4}$ " with Needle Points . . . . . . . . . . . . . . . . . . . . . .
3420 Hairspring Divider, 53 inches, Round Steel Points . ....................
3422 Compass, $5 \frac{3}{3}$ inches, with fixed Needle Point part, removable Pen
3423 Compass, 53 inches, like No. 3422, but with Hairspring
3424 " $5 \frac{3}{4}$ " with removable Pen, Pencil and Needle Point parts and Lengthening Bar, and extra plain divider parts ..........
NOTE.-All pens furnished with upper spring blade.
(Prices for separate parts of Instruments on application.)

## RIEFLER DRAWING INSTRUMENTS (Continued)

All Genuine Riefler Instruments are Stamped "Riefler" and "F. W. Co."

No. 3442


No. 3450


No. 3452


No. 3448

3442 Proportional Divider, 7 inches, for lines and circles, with Removable Steel Points screwed in, for lines 2 to 10 , and circles 7 to 20
3444 Proportional Divider, 8 inches long, for lines and circles, for lines 11-12 to 10, and for circles 3 to 20, with Removable Steel Points ..
3446 Proportional Divider, No. 3442, with Micrometer attachment .....
" " 8 inches, with Rack Movement, Removable Points
3451 Proportional Divider, $9 \frac{1}{2}$ inches, with Rack Movement, Removable Points
3452 Micrometer Attachment separate
MOROCCO CASES for Nos. .... 344 $\begin{array}{llll}3444 & 3446 & 3448 & 3450\end{array}$ RIEFLER DRAWING INSTRUMENTS (Continued)


No. 3460
Steel-spring
" Pen, with Needle Point 3 andle
Pen, with Needle Point, 3 inches, Metal Handle, Steel-spring Bow Pencil, with Needle Point, 3 in., Metal Handle,


No. 3465


No. 3466


No, 3467

No.
3465
3466
3467
3468

Steel-spring Bow Divider, 33 inches, with Centre Adjusting Screw, $\begin{array}{llll}\text { ". } & \text { " } & \text { Pen, } & 3 \frac{3}{4} \text { " } \\ \text { " } & \text { " } & \text { Pencil, } & 3 \frac{3}{4} \text { u }\end{array}$ Set, cont. Nos. 3465, 3466, 3467, in Leather Case,

## DRAWING INSTRUMENTS (Continued)

## RIEFLER IROUND SYSTEM

All Genuine Riefler Instruments are Stamped "Riefler" and "F. W. Co."


No. 3470


No. 3471


No. 3472

No.
Each


Spring on Upper Blade of Pens


## DRAWING INSTRUMENTS (Continued) RIEFLER ROUND SYSTEM

All Genuine Riefler Instruments are Stamped "F. W. Co."


No. 3480


No. 3481


No. 3482

No.
3480
3481 Minute Steel-spring Bow
3482
3483

| $"$ | $"$ | $"$ |
| :---: | :---: | :---: |
| $"$ | $"$ | $"$ |

Leather Covered Case ........ set, cont. Nos. 3480, 3481, 3482, in


No.

Steel Drop Spring Bow or Rivet Pen, new construction, $3 \frac{1}{2}$ in., with Pen part sliding and self-adjusting, for very small circles .... Steel Drop Spring Bow or Rivet Pen, same as No. 3490 , with Pen-
cil part ....................
 and self-adjusting, Revolving Bar

Each

## DRAWING INSTRUMENTS (Continued)

## RIEFLER ROUND SYSTEM

All Genuine Riffler Instruments are Stamped "F. W. Co."


No. 3500
No
3500 Beam Compass, Tubular, German-silver bars, 18 inches long, in two parts, $\frac{5}{16}$-inch diameter, Micrometer Attachment, Pen, Pencil and Needle Point parts
3501 Same, in Leather-Covered Case
3502 Beam Compass, Tubular, same as No. 3500,25 inches long, with three Bars
3503 Same, in Leather-Covered Case


No. 3504
No.
3504 Beam Compass, Tubular, German-silver, 39 inches long, in three parts, $\frac{3}{8}$-inch diameter, Improved Micrometer Attachment, Pen, Pencil and Needle Point parts

Each

## DRAWING INSTRUMENTS (Continued)

RIEFLER ROUND SYSTEM
All Genuine Riefler Instruments are Stamped 'F. W. Co." Illustrations $2 / 3$ Size


No. 3510


No. 3512

No.
3510 Beam Compass, with Improved Micrometer Attachment, Pen, Pencil and Needle Point parts
3511 Same as No. 3510, in Leather-Covered Case
3512 Knife Attachment for No. 3510


No.
3525 Wheel Attachment for No. 3510 Each
3527 " " " Tubular Beam Compass, No. 3504 ........
Note.-For Beam Compass Bars, see index.)

DRAWING INSTRUMENTS (Continued)

## RIEFLER ROUND SYSTEM

All Genuine Riefler Instruments are Stamped "F. W. Co."



No.

3554 Cross Jont Ruling Pen, same, Jinches long
SWEDISH DETAIL RULING PENS
No.
3565 Swedish Detail Ruling Pen, 5 inches, Ebony Handle, with Spring on Upper Blade

Each Swedish Detail Ruling Pen, same, 6 inches
3567 Swedish Detail Ruling Pen, same, 7 inches
The Swedish Detail Pens can be furnished with aluminum handles, instead of ebony, for 50 cents each extra.


No.
3572

## 婙 DRAWING INSTRUMENTS (Continued)

RIEFLER DOTTING WHEELS
Wheel No.

2--------------------------------
$-\cdot-1 \cdot-\cdot-\cdot \cdot \cdot-\cdot-\cdot-\cdot$



6…
No. 3578-View of Dotted Lines
3570 Dotting Pen, with 3 Wheels and Handle


No. 3575
Nith Handle Detached

No. 3576 tion No. 3575 ..........
3577 Dotting Pen, like No. 3575, with 6 Wheels, in Leather Case
3578 Dotting Wheels, separate

RIEFLER'S IMPROVED DOTTING INSTRUMENT For Drawing Dotted, Straight and Circular Lines in Any Desirable Thickness


This Dotting Instrument is the most practical and most reliable Instrument of its kind in the market,

It consists of a Ger-man-silver Frame, on which runs a toothed Guide Wheel and in front of it a round-faced Guide Wheel, holding the Instrument in a vertical position while in use.

The Dotting Wheel is fastened to the axis of the toothed Guide Wheel by means of a screw and runs on the outside of the frame, which admits of an easy interchanging of the different wheels. The numbered side of the Dotting Wheel must be placed towards the outside.

The Pen is attached to a lever, from which a ratchet projects, resting on the Dotting Wheel and causing the Pen to rise and fall according to the notches in the Dotting Wheel, Care should be taken to adjust the Ruling Pen to the right position before ising the Instrument.

For circular lines the Instrument is slipped over the round bar and fastened by means of the screw on the handle, on the other end of which a Needle Point with micrometer screw is attached, the bar being 11 inches long, circles up to 21 inches diameter, can be drawn.


DRAWING INSTRUMENTS (Continued)

RIEFLER ROUND SYSTEM
All Genuine Riefler Instruments are Stamped "Riefler" and "F. W, Co."


No.
3580 Border Pen, 3 Blades, Ebony Handle, $6 \frac{1}{4}$ inches . . . . . . . . . . . . . . . Each
3582 Double Border Pen, 4 Blades, Ebony Handle, $6 \frac{1}{2}$ inches
3585 Railroad Pen, Ebony Handle, $5 \frac{3}{2}$ inches, with Pens bent in same
3586 Railroad Pen, Ebony Handle, $5 \frac{3}{3}$ inches, bent in same direction and
3587 Railroad Pen, with Joints, Ebony Handle, $5 \frac{3}{3}$ inches, Set Screw
3588 Railroad Pencil, Ebony Handle, 53 inches

## DRAWING INSTRUMENTS (Continued)

## RIEFLER ROUND SYSTEM

All Genuine Riefler Instruments are Stamped "Riefler" and "F. W. Co."


No. 3610
No.
"HAVERFORD," in pocket case, containing:
1 Compass, No. 3422, $5 \frac{3}{3}$ inches, with fixed Needle Point, Pen,
Pencil parts and Lengthening Bar,
1 Ruling Pen, No. 3542, $5 \frac{1}{2}$ inches, with Spring on Upper Blade,
1 Box of Leads . . . . . . . . . . . . . . . . . . . ...................... Each


No. 3614
No.
3614 "UNIVERSITY," in pocket case, containing
1 Compass, No. 3422, $5 \frac{3}{4}$ inches, with fixed Needle Point, Pen, Pencil parts and Lengthening Bar,
1 Steel-spring Bow Pen, No. 3461, 3 inches, with Needle Point
1 Ruling Pen, No. 3542, $5 \frac{1}{2}$ inches, with Spring on Upper Blade,
1 Box of Leads
.Each,


No. 3616
No.
"COLLEGE," in pocket case, containing
1 Compass, No. 3422, $5 \frac{3}{2}$ inches, with fixed Needle Point, Pen, Pencil parts and Lengthening Bar,
1 Steel-spring Bow Pen, No. 3461, 3 inches, with Needle Point . .
1 ". ". Pencil, No. 3462, 3 inches, with Needle Point, 1 Ruling Pen, No. 3542, $5 \frac{1}{2}$ inches, with Spring on Upper Blade,
1 Box of Leads
Each,

## DRAWING INSTRUMENTS（Continued）

## REEFLER ROUND SYSTEM

All Genuine Riefler Instruments are Stamped＂Riefler＂and＂F．W．Co．＂


No． 3618
No．
3618 ＂PRINCETON，＂in pocket case，containing：
1 Compass，No．3422，53 inches，with fixed Needle Point，Pen，Pen－ cil parts and Lengthening Bar，
1 Hairspring Divider，No．3420， 53 inches，
1 Steel－spring Bow Pen，No．3461， 3 inches，with Needle Point， 1 ＂＂Pencil，No．3462， 3 inches，with Needle Point，
1 Ruling Pen，3541， 5 inches，with Spring on Upper Blade，



No． 3622
No，
3622 ＂LEHIGH，＂in pocket case，containing：
1 Compass，No．3422， 5 inches，with fixed Needle Point，Pen，Pen－ cil parts and Lengthening Bar，
1 Plain Divider，No．3418， 54 inches，
1 Steel－spring Bow Divider，No．3460， 3 inches，
1 ＂＂${ }^{1}$ Pen，No．3461， 3 inches，with Needle Point， 1 ＂＂Pencil，No．3462， 3 inches，with Needle Point， 1 Ruling Pen，No．3542，5⿺𠃊⿳亠丷厂彡 inches，with Spring on Upper Blade，
1 Box of Leads ．Each，

## F.WEBERCO. $P \quad H \quad 1 \quad L \quad A \quad D \quad E \quad L \quad P \quad H \quad I \quad A$

RIEFLER DRAWING INSTRUMENTS (Continued)


No.
No. 3625 P. C.
3625
"TECHNOLOGY," in folding pocket case, containing:
1 Compass, No. 3422, $5 \frac{5}{4}$ inches, with fixed Needle Point, Pen, Pencil parts and Lengthening Bar,
1 Hairspring Divider, No. 3420, $5 \frac{3}{4}$ inches,
1 Steel-spring Bow Divider, No. 3460, 3 inches,
1 " Pen, No. 3461, 3 inches, with Needle Point, "* Pencil, No. 3462, 3 inches, with Needle Point, Ruling Pen, No. 3542, $5 \frac{1}{2}$ inches, with Spring on Upper Blade, ". " No. 3541.5
Box of Leads ................................................... . . . Each,
3626 N Same assortment as No. 3625, but with 53 -inch Hairspring Compass, No. 3423 instead of 3422, and 6-inch Swedish Detail Pen, No. 3566, instead of No. 3542. In Pocket Case .......... Each,


No. 3627 P. C.
3627 In folding pocket case, containing:
1 Compass, No. 3422, 5? inches, with fixed Needle Point, Pen, Pencil parts and Lengthening Bar,
1 Hairspring Divider, No. 3420, $5 \frac{3}{4}$ inches,
1 Steel-spring Bow Divider, Center Adjustment No, 3465, $3 \frac{3}{4}$ in.,
1 " " Pen, Center Adjustment, No. 3466, $3 \frac{3}{4}$ in.,
1 " " Pencil, Center Adjustment, No. 3467, $3 \frac{3}{4}$ in.,
1 Ruling Pen, No. 3542, 5it inches, with Spring on Upper Blade,
1 " " No. 3541, 5
1 Box of Leads . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Each,

RIEFLER DRAWING INSTRUMENTS (Continued) RIEFLER ROUND SYSTEM
All Genuine Riffler Instruments are Stamped "Riefler" and "F. W. Co."


No. 3628
"HARVARD," in folding pocket case, containing:
1 Compass, No. 3422, $5 \frac{3}{3}$ inches, with fixed Needle Point, Pen, Pencil parts and Lengthening Bar,
1 Plain Divider, No. 3418, $5 \frac{3}{4}$ inches,
1 Steel-spring Bow Divider, No. 3460, 3 inches,
${ }^{1}$ ". ". Pen, No. 3461, 3 inches, with Needle Point, 1 Ruling Pen, No Pencil, No. 3462, 3 inches, with Needle Point, ${ }_{1}$ Ruling Pen, No. $3542,5 \frac{1}{2}$ inches, with Spring on Upper Blade,
1 Dotting Pen, No. 3575, with 3 wheels, Pen part to fit Compass for drawing dotted circles,
1 Box of Leads .....................................................


No. 3630
No.
In folding pocket case, containing:
1 Compass, No. 3422, $5 \frac{3}{3}$ inches, with fixed Needle Point, Pen, Pencil parts and Lengthening Bar,
1 Compass, No. 3404, $3 \frac{3}{2}$ inches, with fixed Needle Point, Pen and Pencil parts,
1 Plain Divider, No. 3418, 53 inches,
1 Steel-spring Bow Divider, No. 3460, 3 inches,
1 Adjustable Bow Pen, No. 3491, with Pencil part,
1 Ruling Pen, No. 3542, $5 \frac{1}{2}$ inches, with Spring on Upper Blade,
1 Box of Leads
Each,

## RIEFLER DRAWING INSTRUMENTS (Continued)

## RIEFLER ROUND SYSTEM

All Genuine Riefler Instruments are Stamped "Riefler" and "F. W. Co."


No. 3636

## No.

3636 Containing:
1 Compass, No. 3424, $5 \frac{3}{4}$ inches, with Pen, Pencil, Needle Point parts and Lengthening Bar,
1 Compass, No. 3412, $3 \frac{1}{2}$ inches, with Pen, Pencil and Needle Point parts,
1 Hairspring Divider, No. 3420, 53 inches,
1 Steel-spring Bow Divider, No. 3460, 3 inches,
1 " " Pen, No. 3461, 3 inches, with Needle Point,
1 " " Pencil, No. 3462, 3 inches, with Needle Point,
1 Adjustable " Pen, No. 3490,
1 Beam Compass, No. 3500, 18 inches, with 2 Bars, Micrometer Attachment, Pen, Pencil and Needle Point parts,
1 Swedish Ruling Pen, No. 3566, 6 inches,
1 Ruling, Pen, No. 3548, 5 inches, with Joint and Needle,
1 " " No. 3542, $5 \frac{1}{2}$ " " Spring on Upper Blade,
1 " " No. 3540, 4 $\frac{1}{2}$ " " " " " "
1 Dotting Pen, No. 3575, 3 Wheels, Pen part to fit Compasses for drawing dotted circles,
1 Box of Leads $\qquad$ Each,

#  

## RIEFLER DRAWING INSTRUMENTS (Continued)

## RIEFLER ROUND SYSTEM

All Genuine Riefler Instruments are Stamped "Riefler" and "F. W. Co."


No. 3638

No.
3638 Containing:
1 Compass, No. 3424, $5 \frac{3}{3}$ inches, with Pen, Pencil, Needle Point part and Lengthening Bar,
1 Compass, No. 3412, $3 \frac{1}{2}$ inches, with Pen, Pencil and Needle Point parts.
1 Plain Divider, No. $3416,3 \frac{1}{2}$ inches,
1 " " No. 3418, 53 "
1 Hairspring Divider, No. 3420, $5 \frac{3}{1}$ inches,
1 Proportional Divider, No. 3442, 7 inches.
1 Steel-spring Bow Divider, No. 3460, 3 inches,
1 " " Pen, No. 3461, 3 inches, with Needle Point,
1 " " Pencil, No. 3462, 3 inches, with Needle Point,
1 Adjustable Bow Pen, No. 3491, with Pencil part,
1 Beam Compass, No. 3500, 18 inches, with 2 Bars, Micrometer Attachment, Pen, Pencil and Needle Point parts,
1 Ruling Pen, No. 3548, 5 inches, Ebony Handle, with Joint and Needle,
1 Ruling Pen, No. 3542, $5 \frac{1}{2}$ inches, with Spring on Upper Blade,
1 " " No. 3540, 4t " " ". " "
1 Dotting Pen, No. 3575,3 Wheels, Pen part to fit Compasses for drawing dotted circles,
1 Box of Leads
Each,

## Sphinx Drawing Instruments <br> ROUND SYSTEM

Sphinx Round System Instruments are not in an experimental stage, but have proven their superior qualities for over fifty years in the hands of the critical draftsman and engineer.

Sphinx Round System Instruments are made by Riefler, universally known as the manufacturer of the celebrated Riefler Round System Drawing Instruments.

Sphinx Instruments are of the same design, material and workmanship as the Precision Riefler, and differ only in minor points of design.

In consideration of the quality and workmanship, Sphinx Round System Drawing Instruments excel anything in drawing instruments ever offered at similar prices.


## DRAWING INSTRUMENTS (Continued)

 SPHINX DRAWING INSTRUMENTS
## Round System



No. $3720-\mathrm{R}$

For Beam Compass Bars, see Index.


No. 3725-R
No. 3726-R


No. $3758-\mathrm{R}$

No.
3720-R Beam Compass, with micrometer adjustment, pen, pencil, needlepoint parts and trammel points, in case
3725-R Proportional Divider, 6 inches, divided for lines and circles, replaceable points
dircles, re-
3726-R Proportional Divider, 7 inches, with rack and pinion, divided for lines and circles, replaceable points
3758-R Rotating Drop Bow Pen, or Rivet Pen, $4 \frac{1}{4}$ inches, with Pen and Pencil part, having two vertical strong steel springs, one shorter than the other, to keep nib of pen always perpendicular to the paper DRAWING INSTRUMENTS (Continued)

F.Weberco. P H I L A D E L P H I A


## DRAWING INSTRUMENTS (Continued)

## SPHINX ROUND SYSTEM INSTRUMENTS IN SETS



No. $3780-\mathrm{R}$
No.
3780-R Folding Pocket Case, containing:
$37085 \frac{1}{2}$-inch Pen and Pencil Compass, with lengthening bar,
fixed needle-point leg and extra divider leg;
3761 5-inch Spring-blade Ruling Pen;
Box of leads and key
$\qquad$
Folding Pocket Case, containing;
Same assortment as Set No. 3780-R, with No. 3704-R 51-inch
Plain Divider ............


No. $3782-\mathrm{R}$
No.
3782-R Folding Pocket Case, containing:
3708-R $5 \frac{1}{2}-i n c h$ Pen and Pencil Compass with lengthening bar, fixed needle-point leg and extra divider leg;
$3731-\mathrm{R}$ 3 $\frac{1}{2}$-inch Steel-spring Bow Pen;
$3761-\mathrm{R}$ 5-inch Spring-blade Ruling Pen;
Box of leads and key ................................................. Pet


No.
No. 3783-R
3783-R Folding Pocket Case, containing:

$$
\begin{aligned}
& \text { 3708-R 5 } 5 \text {-inch Pen and Pencil Compass with lengthening bar, } \\
& \text { fixed needle-point leg and extra divider leg; } \\
& \text { 3731-R } 3 \frac{1}{2} \text {-inch Steel-spring Bow Pen; } \\
& \text { 3732-R 32-inch Steel-spring Bow Pencil; } \\
& \begin{array}{l}
\text { 3761-R 5-inch Spring-blade Ruling Pen; } \\
\text { Box of leads and key ............ }
\end{array}
\end{aligned}
$$

## FWEBERCO $P$ H I L A D E L P H I A

 ST. LOUIS BALTIMORE
## DRAWING INSTRUMENTS (Continued)

 SPHINX ROUND SYSTEM INSTRUMENTS IN SETS

No. 3784-R
No.
3784-R Folding Pocket Case, containing:
3708-R 5六-inch Pen and Pencil Compass with lengthening bar, fixed needle-point leg;
3704 -R $5 \frac{1}{2}$-inch Plain Divider;
$3730-\mathrm{R} 3 \frac{1}{2}$-inch Steel-spring Bow Divider;
$3731-\mathrm{R} ~ 3 \frac{1}{2}$-inch Steel-spring Bow Pen;
3732-R 3 $\frac{1}{2}$-inch Steel-spring Bow Pencil;
3761-R 5-inch Spring-blade Ruling Pen;
Per Set
Box of leads and key
3785-R Folding Pocket Case, containing:
Same assortment as No. 3784-R, without No. 3730-R Steelspring Bow Divider


No. 3786-R
3786-R Folding Pocket Case, containing:
3708-R 5 $\frac{1}{2}$-inch Pen and Pencil Compass with lengthening bar, fixed needle-point leg;
3705-R 5 $\frac{1}{2}$-inch Hairspring Divider;
$3730-\mathrm{R} \quad 3 \frac{1}{2}$-inch Steel-spring Bow Divider;
$3731-\mathrm{R} 3 \frac{1}{2}$-inch Steel-spring Bow Pen;
3732-R $3 \frac{1}{2}$-inch Steel-spring Bow Pencil;
$3760-\mathrm{R} \quad 4 \frac{1}{2}$-inch Spring-blade Ruling Pen;
3761-R 5-inch Spring-blade Ruling Pen;

## Cosmos Drawing Instruments

Round System

In offering Cosmos Drawing Instruments, we have answered the call for a School Instrument of simple and rigid construction, at a minimum cost.

Cosmos Instruments are manufactured by Clemens Riefler, originator of the "Round Systems" and universally known for the manufacture of the Precision Riefler Round System Drawing Instruments, and also our Sphinix Drawing Instruments for Colleges.

Cosmos Instruments are of the round system and are constructed of selected Metals.

The compass and divider legs and stocks are made of Dur-Alumin, and the points and screws of high grade steel.

Dur-Alumin is the aluminum alloy, very strong and durable, used abroad in aeroplanes and dirigible balloon construction. It lends the drawing instruments great lightness, combined with rigidity and strength.

## COSMOS ROUND SYSTEM INSTRUMENTS




No, 3830-R


No. 3831-R

## SEPARATE INSTRUMENTS

3804-R 51 -inch Plain Divider.....
3805-R $5 \frac{1}{2}$-inch Hairspring Divider ${ }^{3}$ lengthening bar, fixed needlepoint leg and extra divider leg
3830-R $3 \frac{1}{2}$-inch Steel-spring Bow Divider, Metal handle .........
3831-R $3 \frac{1}{2}$-inch Steel-spring Bow Pen, Metal handle
3832-R $3 \frac{1}{2}$-inch Steel-spring Bow Pencil, Metal handle
3833-R $3 \frac{1}{2}$-inch Combination Bow Pen and Pencil, Metal handle ...

## DRAWING INSTRUMENTS (Continued) <br> COSMOS RULING PENS



No. 3861-R
No.
Each
3860-R $4 \frac{1}{2}$-inch Spring-blade Ruling Pen, Aluminum Handle
3861-R 5-inch Spring-blade Ruling Pen, Aluminum Handle
3862-R 5 5 -inch Spring-blade Ruling Pen, Aluminum Handle ............

COSMOS ROUND SYSTEM INSTRUMENTS IN SETS


No. 3872-R

[^13]

## DRAWING INSTRUMENTS (Continued)

COSMOS ROUND SYSTEM INSTRUMENTS
IN SETS


No. 3873-R
No.
3873-R Barlock Case, containing:

> 3808-R 5k-inch Pen and Pencil Compass with lengthening bar, fixed needle-point leg and extra divider leg;
> $3831-\mathrm{R}$ 31-inch Steel-spring Bow Pen;
> $3832-\mathrm{R} \quad 3 \frac{1}{2}$-inch Steel-spring Bow Pencil;
> 3861-R 5-inch Spring-blade Ruling Pen;
> Per Set
> Box of leads and key


No. 3874-R
3874-R Barlock Case, containing:
3808-R $5 \frac{1}{2}$-inch Pen and Pencil Compass with lengthening bar,
3804 fixed needle-point leg:
3830-R 32 -inch Steel-spring Bow Divider;
3831-R 32-inch Steel-spring Bow Pen;
3832-R $3 \frac{1}{2}$-inch Steel-spring Bow Pencil;
3860-R $4 \frac{1}{2}$-inch Spring-blade Ruling Pen;
3861-R 5-inch Spring-blade Ruling Pen; Per Set Box of leads and key

Por
3875-R Barlock Case, containing:
3808-R 51-inch Pen and Pencil Compass with lengthening bar, fixed needle-point leg;
3804-R 51-inch Plain Divider;
3831-R 32-inch Steel-spring Bow Pen;
3832-R $3 \downarrow$-inch Steel-spring Bow Pencil;
3861-R 5-inch Spring-blade Ruling Pen;

# F.WEBERCO. <br> P H I L ST. LOUIS <br> A D E L P PALTIMORE 

## DRAWING INSTRUMENTS (Continued)

## SCHOOL INSTRUMENTS

Nickel-Plated

These Instruments are well made and, being Nickel-plated, have the advantage over Brass and Steel Instruments, as they will not rust or tarnish.


[^14]
## F.WEBERCO. P PT. LOUIS A D E L BALTIMORE

## NICKEL-PLATED SCHOOL DRAWING INSTRUMENTS

IN SETS


No. 4071


No. 4075

Containing Compass, 5 inches, with Pen and Pencil parts, Ruling
4075 Cond protractor as shown. ening Bar, Plain Divider, Ruling Pen, $3 \frac{1}{2}$-inch parts and Lengthof Leads Containing same assortment as No, 4075, but with addition of a
Bow Pencil Bow Pencil

RULING PENS, IN TRAY:


No.
4090 Tray, containing 12 Ruling Pens, assorted sizes and quality, at popular prices.
Contains: 1 pen each No. $3760-\mathrm{R}$, No. $3761-\mathrm{R}$, No, $3762-\mathrm{R}$; 2 pens each No. $3860-\mathrm{R}$, No. $3861-\mathrm{R}$, No. $3862-\mathrm{R}, 3$ pens No. 4010 . Especially designed for the dealers

## PROTRACTORS

## Metal Protractors



No. 4160/62


No. 4161/63

No. 4160 4161 4162 4163 4164 4170 4171
4172
4175 4176 4177 4179

Brass (Nickeled) Half Circle, whole degrees, 3 " (Silvered) " " ${ }^{4}$ " ${ }^{\frac{1}{2}}$ " " " " " " " " " " " " 3 in., like No. 4161 .
Triangle and Protractor, combined
Brass (Fine) Half Circle, whole degrees, $3 \frac{3}{2}$ inches ................

German-Silver Half Circle, whole degrees, $4 \frac{1}{4}$ inches .. $\qquad$
$\begin{array}{llll}" & " & " & \frac{1}{2} \\ " & " & " & \frac{1}{2} \\ " & " & " & \frac{1}{2}\end{array}$ $\qquad$
$\qquad$ ................


No. 4164
No.
4180 German-Silver Protractor, Circular, $\frac{1}{2}$ degrees, 5 inches $\frac{1}{\frac{1}{2}}$ degrees, $\frac{5}{6}$ inche Each

## METAL PROTRACTORS (Continued)



No. 4185

## Semi-Circular, Center on Inner Edge

No.
4185
4186
4188
4189


No. 4190
Semi-Circular, with Movable Arm and Horn Centre
No.
4190
4191 4192

```
German-Silver Protractor, \frac{1}{2}}\mathrm{ degrees, }5\mathrm{ inches
```

Polished Mahogany Cases for Nos.
Each,

```

\section*{ ST. LOUIS BALTIMORE}


No. 4200
Semi-Circular, with Arm and Vernier

No.
4200
4203
4204
German-Silver Protractor, \(\frac{1}{2}\) degrees, reading to 3 minutes, \(5 \frac{1}{2} \frac{1}{4}\)...
Each


No. 4206
Circular, with Arm and Vernier

No.
4206
4208
4209

German-Silver Protractor, \(\frac{1}{3}\) degrees, reading to 3 minutes, \(5 \frac{1}{2}\) in... Polished Mahogany "Cases for Nos, 4200 "童 1 " " 18 " 10 . Each \(\qquad\)

\section*{}

\section*{METAL PROTRACTORS (Continued)}


\section*{Semi-Circular, with Arm, Vernier and Micrometer Adjustment}

German-Silver Protractor, degrees, reading to 1 minute, 8 in...
\[
4212 \text { " } 4 \text { " } \frac{1}{\frac{1}{4}} \text { " }
\]

Circular, with Arm, Vernier and Micrometer Adjustment
4215 German-Silver Protractor, \(\frac{1}{\frac{1}{2}}\) degrees, reading to 1 minute, 8 in ...
 \(\begin{array}{llllll}\text { Polished Mahogany Cases for Nos. } & 4211 & 4212 & 4215 & 4216\end{array}\) Each .................................

\section*{DRAUGHTSMEN'S STEEL PROTRACTOR}


This Protractor can be quickly set to any angle. It can be used either side up and on either of the two outside edges of the frame. Advantageously used in dividing circles, transferring angles, or laying off given angles, without resetting, on either side of a line. It forms a convenient extension of a T-square, and frequently takes the place of 45 -degree and 60 -degree angles.

\section*{TRANSPARENT CELLULOID PROTRACTORS}


The graduations of these Celluloid Protractors are etched in on the side facing the drawing, and the celluloid being perfectly transparent, they afford a most accurate reading of the degrees.

No.
4224
4225
4226
4227
4228
4229
4230
Celluloid Protractor, transparent, Half Circle, \(\frac{1}{\frac{1}{8}}\) degrees, 4 inches.


\section*{EXTRA HEAVY BEVELED-EDGE CELLULOID \\ PROTRACTORS}



\section*{CELLULOID TRIANGLE PROTRACTORS}

"SPHINX" PATENT AD.JUSTABLE PROTRACTOR


No. 4242
No. 4242 "Sphinx" Patent Adjustable Bristol Board Protractor, 5 inches. For
Each

\section*{PAPER PROTRACTORS}

No.
4244 Paper Protractor, Semi-circular, 5 in. diam., \(\frac{1}{2}\) deg., on bristol board,
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline 4245 & " & & cular & & & & & & & & & & , \\
\hline 4246 & " & " & \({ }^{\text {unar, }}\) & 8 & & ، & . & & & & " & & paper \\
\hline 4247 & " & . & " & 14 & & . & " & & & " & . & & \\
\hline 4248 & " & \(\cdots\) & . & 1 & & . & " & & & " & " & & 相 \\
\hline 4249 & " & . & " & 14 & & . & " & & & " & - & & racing paper \\
\hline
\end{tabular}

For Protractor Scales, see pages 254 and 255.

\section*{RIEFLER PRECISION ELLIPSOGRAPHS \\ COMBINED}


Fig. 2


Fig. 1

\section*{DESCRIPTION}

The apparatus consists of two main parts, the frame and the beam compass. The former forms a \(T\) with slots in both arms in which the clamps i and il slide; these hold the beam 1-1 with pen or pencil 2 ; it is divided and can be adjusted in the clamps and secured with the screws \(\mathbf{k}\) and \(\mathbf{k} 1\); the frame can be separated in two parts a and b for keeping in a case. For use, the frame is set and screwed together and the middle part at n set in the centre of the intended ellipse, the front edge of the arm b-b to cover exactly the major axis; then secure in position by screwing down \(s\) till needle point of the same pierces the paper; adjust the beam \(\mathbf{1}\) in clamp \(i\) to the length of minor axis and secure with screw \(\mathbf{k}\); then adjust beam in clamp il to the length of major axis, adding 20 mm . to the same, the axis of this clamp being so much nearer to the drawing point, and secure with screw \(\mathrm{k}^{1}\); set pen or pencil z to correct height by means of screw \(m\) and draw one-half of the ellipse; after this, lift drawing point \(z\), release screw \(p\), reverse the instrument by swinging it 180 degrees around point \(n\), reset screw p and drawing point z , and draw other half.

The instrument permits to draw all kinds of ellipses and circles, from 10 to 560 mm . major diameter; the pen with bent point to be used for ellipses of less than 22 mm . diameter.

Fig. 1 shows the Beam Compass alone. Fig. 2 shows some examples.
No.
4250 Ellipsograph and Beam Compass combined, complete, in case ....


No. 4251
4251 Improved Riefler Ellipsograph for Circles and Ellipses. Ellipses and circles are drawn with one operation.
After setting the major and minor axis to desired sizes, complete ellipse or circle is drawn by turning lever e one revolution. Ellipses having major axis from \(0-22 \mathrm{~cm}\). ( \(0-85 / 8 \mathrm{in}\).) and minor axis from 0.7 cm . ( \(0-21 / 4 \mathrm{in}\).) can be drawn. Graduated in centimeters and millimeters with vernier reading to tenths of millimeters: Supplied with pen and pencil attachments for paper and needle point for metal. Complete in hardwood case, nickle-plated handle, lock and key. Each,

\section*{PRECISION PANTOGRAPHS}

\section*{GENUINE OTT PANTOGRAPHS}


No. 4260

Pantograph, suspended, made of square, hollow, nickeled brass tubes, divided in millimeters, with verniers on the beveled sides for setting the instrument to \(\frac{10}{10}\) millimeter scale, and micrometer movement for adjusting the proportions. For reducing and enlarging in all proportions, from \(\frac{1}{20}\) to \(\frac{8}{5}\). It is also arranged that by exchanging pole and drawing pencil it can be used for \(\frac{1}{\frac{1}{2}}\) proportion or copying in the original size. The instrument is then held freely, swinging by means of the diagonal supporting bar and can then be used also on etching ground by removing the roller on the drawing point. The joints run on cone-shaped steel pivots, to assure an accurate and easy movement. The standard is provided with 2 set-screws and spirit-level to adjust the instrument to a horizontal position, with convenient controlling arrangement. In polished wooden case, with lock and handle.

No.
4260 Length of arms, \(37 \frac{1}{2}\) inches ( 96 cm .) ............................ Each
4261 Same as 4260 , but with clamping base and standard (No 4264), instead of weight base

PANTOGRAPHS (Continued)


No. 4262
Pantograph, suspended, made of square, hollow, nickel-brass tubes, divided in millimeters. The edges of the slides beveled to allow proportions to be adjusted without verniers and micrometer movement. For reducing and enlarging in all proportions from \(\frac{1}{20}\) to \(\frac{1}{3}\). The joints run on cone-shaped steel pivots, to insure an accurate and easy movement; simple control; no screws on the standard. In polished wooden case, with lock and handle.
\(4262 / 33\) Length of arms, 33 inches ( 84 cm .)
\(4262 / 38\) Length of arms, \(37 \frac{1}{2}\) inches ( 96 cm .)
4263/33 Same as No. 4262/33, but with clamping base and standard (No.
4264), instead of weight base; length of arms, 33 inches ..........
\(4263 / 38\) As above, but with arms, \(37 \frac{1}{2}\) inches ............................


No. 4264-Clamping Base, Separately
The above illustration shows the clamping type of weight or base and standard for pantographs Nos. 4260 and 4262 . This base is preferred by a number of engineers, and can be furnished separately for instruments already in use at each.

The instruments can be furnished with this type base in place of the regular base, as shown in the illustrations of the respective instruments, see Nos. 4261 and 4263 .

Note.-Pantographs Nos. 4260 and 4262 are furnished with a Tracing Point, a Dotting Needle, a Lead Pencil Slide and a Reverse Dotting Needle; 3 or 4 Brass Weights to weigh down the needle and lead pencil; a small Set Level and Instructions for use.



\section*{PANTOGRAPHS (Continued) \\ WOODEN PANTOGRAPHS}


No.
4266
Pantograph, suspended, made of well-seasoned, polished Pearwood bars, Ex1 inch thick, for enlarging and diminishing in the following proportions:
\[
\frac{1}{20}, \frac{1}{12}, \frac{1}{10}, \frac{1}{6}, \frac{1}{6}, \frac{1}{5}, \frac{1}{4}, \frac{1}{3}, \frac{2}{6}, \frac{1}{2}, \frac{3}{5}, \frac{2}{8}, \frac{3}{4}, \frac{4}{5}
\]

The joints are made of polished steel cones in metal sockets and can be adjusted to any of the above ratios.

Complete in hardwood box, with Tracing Point, Steel Point, Pencil Point, with 3 Brass Weights and box of Leads.
\[
\text { Length of arms, } 38 \text { inches ( } 96 \mathrm{~cm} \text {.) ...................... Each, }
\]


No.
No. 4270
4270 Cherry Wood, arms 13 inches
4271 Maple ".
4273 Maple ". " 17 .
4274 ". ". 17 " Brass Mountings ...................
427432 All Metal Adjustable Pantograph . . . ....................................


No. 4275
4275 Pearwood, arms 22 inches, Brass Mountings


\section*{Slide Rules}

\author{
THE SLIDE RULE
}

With the aid of a slide rule, arithmetical, algebraic and trigonometrical problems may be solved more easily and rapidly and with much less chance of error than by ordinary calculation.

The principle involved in the slide rule is the graphic representation of logarithmic values, but a knowledge of logarithms is not required for the successful manipulation of the rule. The principles which must be familiar are few and very simple and easily mastered with a little practice.

Our "Sphinx Improved" Slide Rule embodies great improvements. It is made of the very best, well-seasoned, built-up mahogany or pearwood stock, with white celluloid facings. The graduations are all engine divided, clearly and accurately cut, and being on a white background very legible. The main improvement, however, is the construction of the stock or body of the rule. The rules constructed as formerly with celluloid facing on the inside of groove only, are always liable to warp, with climatic changes. In our Improved Sphinx Slide


Rule this drawback is entirely overcome by covering the two faces of the stock with celluloid, as shown in above cut. This eliminates all liability of the rule to warp under atmospheric changes.

The above cut illustrates the construction of the Sphinx Slide Rule. A is the wood stock, B , the celluloid facing.

\section*{AUTOMATIC ADJUSTMENT}

One of the principal features of the "Sphinx" and other F. W. Co. slide rules is the automatic adjustment, by means of which bothersome adjustments are entirely eliminated.

Briefly described, the adjustment, which is very simple, consists in a series of strong, flat steel springs (in 10 -inch rules, usually three), connecting the two sides of the stock, which has been severed in two, lengthwise, directly under the slide, the entire length of the rule. To insure perfect rigidity, the two pieces are also held together, and in place, by a strip of heavy celluloid, secured on the underside of the stock. The table of constants is attached to this strip of celluloid.

The steel springs are so adjusted as to take up, or compensate any contraction or expansion of the rule, due to climatical changes. Thus, we have a slide rule; completely accommodating itself under all conditions and a slide rule, which can be absolutely relied upon at all times and at all places.


\title{
SLIDE RULES (Continued) \\ \\ F. W. CO.'S "SPHINX" IMPROVED \\ \\ F. W. CO.'S "SPHINX" IMPROVED SLIDE RULES
} SLIDE RULES
}

The Stocks Are Made of Thoroughly Seasoned and Selected Hardwood, with White Celluloid Facing

\section*{5-INCH RULE}

4277 F. W. Co.'s "Sphinx" Improved Slide Rule, 5-inch, engine divided, divisions on white facings, glass indicator with single line, in case, with directions,

Note--This rule has the accuracy of the regular 10 -inch rule. For closer description refer to No. 4286.

\section*{10-INCH RULE}

4281 F. W. Co.'s "Sphinx" Improved Slide Rule, 10inch, engine divided, divisions on white facings, glass indicator with single hairline, in case, with directions

\section*{15-INCH RULE}

4283 F. W. Co.'s "Sphinx" Improved Slide Rule, 15inch, engine divided, divisions on white facings, glass indicator with single hairline, in case, with directions \(\qquad\)

\section*{20- and \(24-\mathrm{INCH}\) RULES}

4284 F. W. Co.'s "Sphinx" Improved Slide Rule, 20inch, engine divided, divisions on white facings, glass indicator with single hairline, in case, with directions

4284-A 24 -inch
\(\qquad\)

\section*{"STUDENTS'" SLIDE RULE}

4281-5 Like No. 4281, engine divided. Very accurate, and has cursor with aluminum frame and single hairline, but without celluloid facings

\section*{SLIDE RULES (Continued)}


\section*{SPHINX "MANIPHASE" SLIDE RULE}

For general engineering practice, for college work, field work and usual commercial uses where quick and reasonably accurate readings are necessary, the Sphinx "Maniphase" is unsurpassed. On account of its comparative simplicity, the rule may be used with great facility, even by one unacquainted with the use of logarithms with very little practice, while at the same time, it is designed to perform several more than the usual number of operations required of a slide rule. The two edges of the rule are provided with an inch scale and a centimeter scale, respectively, which scales are quite convenient for \% general office use.

This rule, in addition to the usual operations of multiplication, division, squares and square roots, etc., is designed for the solution of problems involving cubes, cube roots and many higher powers and roots, logarithmic computations and for solving problems involving the product of three factors with one setting of the cursor.

The cursor of the "Sphinx" Rule is also of a newer type, being wider than the ordinary curser and also being provided with three hairlines instead of one. With these three hairlines it is possible to determine at one setting, the area of a circle of given diameter, or the diameter of a circle of given area.

This arrangement of the cursor also gives a clearer reading and avoids the annoyance of the index figures being covered up by the metal parts of the cursor. The hairlines are also made different in color, so as not to become confusing.

\section*{Price}

No. Each

\section*{4288}
"Sphinx" Maniphase Slide Rule, 10 -inch, engine divided, divisions on white facings, glass indicator with three hairlines, in imitation leather case, with directions
4288-A "Sphinx" Maniphase, same as No. 4288, but 6 inches long, double hairlines on cursor. Finely graduated and reads as accurately as the 10 -inch rule, in imitation leather case
\(4288 \frac{1}{2}\) "Sphinx" Maniphase Slide Rule, 20 inches long ..
Note.-The "Sphinx" Maniphase Slide Rule has proven itself a favorite among engineers and the profession generally.

\title{
FWEBERCO \(P\) H I L A D E L P \(P\) I A BALTIMORE
}

\section*{SLIDE RULES (Continued)}

\section*{THE "PRECISION" SLIDE RULE}


No. 4289

The mean error in the product of two factors, calculated with the scales A and B (in which the length of the logarithmic unit is 12.5 cm .), lies between about \(0.12-0.08 \%\) of the result. The latter accuracy, however, can be obtained only by careful practice and long use of the instrument. For many purposes, greater accuracy is required, especially in the calculation of complex expression, where the repeated addition and subtraction of lengths has to be made without reading the intermediate results; and for various purposes in practical surveying, e. g., checking triangulation, balancing of errors, and the calculation of areas.

To satisfy these requirements, a slide rule has been made, which allows of a considerably greater accuracy in the result. With fairly rapid use and with an exact knowledge of the instrument, an error of \(0.03 \%\) in the result, with two factors, will not generally be execeeded. This increase in accuracy is obtained by making the scale length of the logarithmic unit equal to 50 cm . instead of 12.5 or 25 cm . The scale is, however, not made in one length of 50 cm ., but in two lengths of 25 cm . each, so that the rule is convenient for setting and reading, while preserving the size of a pocket instrument; also in order that the harmful effect of expansion and warping, which becomes more appreciable in long rules, shall not impair the accuracy of the instrument. All the other scales, including those on the back of the slide, are based on the scale length of 50 cm .; so that all calculations with this slide rule have a uniform and considerably greater degree of accuracy than those made with the ordinary slide rule. It is, therefore, called the "Precision" Slide Rule.

At first sight, the arrangement may appear difficult to follow; but as soon as some familiarity with the instrument has been acquired, it is seen that on account of the arrangement of the scales, not only does the slide rule become more intelligible, but the increase in accuracy which can be obtained is very marked.

No.
4289 "Precision" Slide Rule, 10 -inch, engine divided, celluloid faced, cursor with one hairline, in case with instructions

\title{
FWEBERCO. P ST. Louis
}

SLIDE RULES (Continued)

\section*{THE "SPHINX JUNIOR" SLIDE RULE}


\section*{No. 4286}

The "Sphinx Junior" Slide Rule combines the accuracy of a regular 10 -inch Sphinx with the convenience afforded by its compactness and portability. The "Sphinx Junior" is \(31 / 2\) inches long, \(5 / 16\) inch thick, 1 inch wide and weighs only \(11 / 2 \mathrm{oz}\)., but ranks in accuracy and reliability with the larger rules. The construction of this rule embodies all the improvements and advantages of our Sphinx Rules, the ultimate subdivisions are as fine as those on the regular 10 -inch rules and by means of a powerful, yet compact and convenient magnifying indicator, their value is easily ascertained with, the same percentage of accuracy as can be obtained by the 10 -inch rules.
No.
Each
4286 "Sphinx Junior" Slide Rule, 5-inch, engine divided, divisions on white facings, magnifier indicator, imitation leather case, with directions

THE "DWARF" SLIDE RULE
No.
4287 "Dwarf" Slide Rule, for the vest pocket, 4-inch, engine divided, celluloid facings, aluminum indicator, in case, with directions

\section*{THE "ELECTRIC" SLIDE RULE}


No. 4291
Especially evolved in response to a demand for a suitable slide rule for Electrical Engineers and for students in Electro-Technology,

Serves in an excellent manner the facility of calculation of all electro-technological problems. The table of constants, on the reverse of the rule, makes the reference to hand-books almost superfluous.
No
4291 "Electric" Slide Rule, 10 inches only, celluloid faced, engine divided, in case

THE "CHEMIC" SLIDE RULE


No. 4292
Especially useful to the practical Chemist in Organic and Inorganic Analysis, the reduction of gases, etc., etc., resulting therefore in the superfluity of all tables of reference.
No.
4292 "Chemic" Slide Rule, celluloid faced, 10 inches long, engine divided, in case

\section*{SLIDE RULES (Continued)} THE IMPROVED HALDEN CALCULEX


This is the most perfect and durable of all circular slide rules, and represents an important advance in the theoretical and mechanical principles upon which the Calculex is based.

It is a metal dial duplex slide rule with metal packing and a lock nut which makes it impossible for the instrument to get out of order. It can neither warp nor shrink, owing to its being entirely of metal.

It is acknowledged to be the most compact, convenient and simplest slide rule, as well as the most accurate circular rule, ever known to the engineering profession of the world.

The Book of Rules is a very complete manual and has been compiled and arranged to fit in the compartment of the case, so that the calculator and Book of Rules can be carried in the vest pocket without the least inconvenience,

The Calculex, briefly described, consists of a disc within a ring, which together form a dial surrounded by a rim and protected on both sides by glass discs on which the hairline is marked radially and is revolved by the two thumbs. The centre of the dial is turned by holding the nut on each side between the finger and the thumb, the outside of the dial being fixed to the rim.

The \(\log\) of a number, squares, square roots, cubes, cube roots, angles, etc., can be found by reading direct from the hairline without moving the dials. It is capable of solving more problems and only requires about one-quarter of the movements necessary with other slide rules.

The front face contains five circles of scales. The outer scale, or No. 1, is a scale of logarithms; Nos, 2 and 3 are calculating scales A and B; Nos. 4 and 5 are square roots of scale B.

The back face contains six circles of scales. The outer scale, or No. 6 , is a scale of angles; Nos. 7 and 8 are calculating scales for inverse proportions; Nos, 9,10 and 11 are cube roots of scale \(B\).
No.
4294 Halden Calculex, in case, with Book of Rules. Complete

\section*{SLIDE RULES (Continued)}

THE MERRITT BEAM SCALE
For Computing the Strength of Steel Beams


No. 4298
Absolutely Accurate. Adapted to All Conditions. Load, Spacing, Span, Etc., Found Instantly. Mistakes Absolutely Eliminated
The Merritt Beam Scale for computing the strength of steel beams is based on the principle of the Engineers' Slide Rule and was designed to simplify computations of this kind, and to eliminate all chance of errors. Tables and formulae are absolutely unnecessary when the Merritt Beam Scale is used, and the speed with which answers to widely varying problems may be solved can hardly be appreciated by anyone who has not had the pleasure of using it. No.
4298 Merritt Beam Scale, on Heavy Bristol Board

\section*{THE WAGER TIMBER SCALE}

For Computing the Strength of Wooden Beams


No. 4299
For Computing the Strength of Wooden Beams Absolutely Accurate. Adapted to All Conditions. Load, Spacing, Span, Etc., Found Instantly. Mistakes Absolutely Eliminated
To illustrate the simplicity of the Scale the following is given:
How far apart shall \(6 \mathrm{in} . \times 12 \mathrm{in}\). timbers of white oak be placed to safely support a load of 150 pounds per square foot, the span being 18 feet, and New York law governing the design? Select the fibre stress for white oak allowed in New York City (given on back of Scale: 1000 pounds. Place 12 in scale B below 6 in scale A. Place 1000 in scale E over 150 in scale F. Above 18 in scale \(D\) read \(2 \mathrm{ft},-0 \mathrm{in}\). in scale C .

The Wager Timber Scale, for computing the strength of wooden beams, contains more information than could be given in 500 pages of tables. It is based on the principle of the Engineers' Slide Rule, and five minutes inspection will convince anyone that it is simplicity itself.
No.
Each
4299 Wager Timber Scale, on Heavy Bristol Board

\section*{SLIDE RULES (Continued)}

SEPARATE CURSORS-LEATHER CASES


No.
4276 B Indicator, with Single Hairline, for Nos. 4277, 4281 and 4292
4276 C " " Double Hairline, for Nos. 4277, 4281 and 4292 ..
4276 E Cursor, with Single Hairline, for all 10 -inch, 15 -inch and 20 -inch slide rules, Nos. 4283, 4284, 4284 A, 4289, 4291
4276 F Cursor, with 3 Hairlines, for No. 4288, Sphinx 10-inch Maniphase Slide Rule
\(\qquad\)
4276 G Magnifying Cursor, for No. 4286
4276 H " " "No. 4281
4276 K " " " No. 4288 (and similar rules) .............
4276 L " " 20 -inch rules
4276 M Improved Magnifying Attachment, with Plano-Convex Lenses.
Folds down on rule, when not in use


No. 4276 G to L


No. 4276 M

\section*{LEATHER CASES}

Substantially Built of Stiff Sole Leather, Machine Sewed
No.
4276 P For all 5 -inch Slide Rules
Each
4276 R " " 6 - and 10 -inch Slide Rules
4276 S " " 15 -, 20 - and 24 -inch Slide Rules
Note,-In ordering separate cursors, or leather case, give name or number of slide rule to be fitted.

\section*{PLANIMETERS AND INTEGRATORS}

Of all mechanical devices for computation Planimeters and Integrators rank foremost as the most ingenious and useful aid to the modern civil, mechanical and marine engineer.

Planimeters are designed for ascertaining by a simple mechanical operation the area of any plane surface, represented by a figure drawn to any scale, such as indicator diagrams, profiles, plans, sections, etc. They are classed as Polar Planimeters and Rolling Planimeters.

\section*{AMSLER TYPE PLANIMETERS}


No. 4305
No.
4305 Amsler Type Planimeter, German silver, arranged for measurement of areas in square inches. Range: Circle of 18 inches diameter, with complete instructions, in case .....................................


No.
4307 Amsler Type Planimeter, German silver, arranged for measuring areas in either of several units, with special arrangement for finding rapidly the mean height of indicator diagrams. Range: Circle of 25 inches diameter. Length of diagram, 2-8 inches, with complete instructions, in case

PLANIMETERS AND INTEGRATORS (Continued)
AMSLER MECHANICAL INTEGRATORS


No. 4310
No.
Each
4310 Amsler Mechanical Integrator, German silver, with two recording mechanisms, giving the area and moment of any figure; two tracing points, grooved steel straight edge, 29 inches long, in case, with directions
Integrator No. 4310 gives the area and moment of any figure by a simple mechanical operation. It is provided with two tracing points, for large and small figures. The one nearest to the centre of rotation of the instrument effects a greater travel of the measuring wheel; consequently the area value of the wheel unit is smaller and the result mare accurate. Large figures can be measured in sections. Area and moment of figures drawn to scale can be easily obtained by means of a formula furnished with each instrument.

The range of the instrument is: Longitudinal, 26 inches; Transverse, 15 inches.


No.
No. 4311
\[
4311 \text { Amsler Mechanical Integrator, with three recording mechanisms, } \begin{aligned}
& \text { giving the area, moment and moment of inertia of any figure; } \\
& \text { German silver, two tracing points, two gauges for adjusting instru- } \\
& \text { ment to axis of moments, instrument in walnut case; grooved steel } \\
& \text { rail, } 59 \text { inches, in separate hardwood case, with directions ......... }
\end{aligned}
\]

\section*{PLANIMETERS AND INTEGRATORS (Continued)}

\title{
GENUINE OTT COMPENSATING PLANIMETERS
}

\section*{Special Feature of the Compensating Polar Planimeter}

The principles of the action of a planimeter are founded on the proportionality, existing between the measure of turning of the recording wheel and the area traced. This proportionality, on the other hand, is based on the supposition, that the axis of the wheel is perfectly parallel to the mathematical tracer arm, i. e., the line drawn from the tracing pin to the axis of the joint of the bars. If this supposition is not strictly fulfilled-a state, that may by careless handling be met even with the best of instrument,-the results of measuring are bound to be more or less faulty. There is, however, a very simple means of counteracting inaccuracies caused by this non-parallelism. It consists in tracing a figure twice, without in any way shifting the pole. Before doing the second tracing, the joint of the pole and tracer arm is bent into the opposite position to what it was at the first tracing. By doing so, the faulty factors of the measurements have a positive value with one of the tracings, and an equal but negative value with the other tracing, and consequently are eliminated from the arithmetical means of the results of both tracings. This expedient is, however, not applicable with every planimeter, but solely with the Compensating Planimeter, which has derived its name from the very circumstance that, by the means just indicated, any faults resulting from the aforementioned non-parallelism are compensated.

The mean height of indicator diagrams can also be found. The tracer arm can be easily adjusted to the length of the base, by placing the tracing point at the right-hand end of the base, and sliding it in its sleeve, until the other end of the base becomes visible in the center of the small opening in the pole bearing, the pole arm being removed. (See also above.)

The Compensating Planimeters are rapidly becoming the favorite instruments and are gradually displacing the older types in drawing rooms and offices. The advantages lying in their use are immediately manifest to one acquainted with both styles.

Complete Treatise, illustrated, covering the Theory and Uses of Compensating Planimeters, in pamphlet form, accompany each instrument.

PLANIMETERS AND INTEGRATORS (Continued) COMPENSATING PLANIMETERS


No, 4312
No
4312 Compensating Plainmeter, simple pattern, German silver and hard bronzed brass, with short, graduated tracer arm, limited adjustment; as a rule set for vernier until 0.01 sq. in. (By computing figures drawn to a definite scale, the area is obtained by multiplying the reading of the roller with the surface scale of the drawing.) Improved pole weight. In velvet-lined morocco case, with testing rule, manual and table of settings for inches


No. 4313
No.
4313 Compensating Planimeter, German silver and hard bronzed brass, tracer arm 9 inches, fully graduated, adjustable to its full length; pole arm \(7 \frac{3}{4}\) inches long. Improved pole weight. In velvet-lined morocco case, complete with testing rule, table of settings for inches and manual

As the tracer arm is fully graduated, very fine settings can be effected with great accuracy for any scale in U. S. Standard or any foreign measurement, and allowance can be made for the shrinkage of drawings. The tracer arm is also provided with index marks for a number of scales for inches and metric measurements. The testing rule greatly facilitates the rapid finding of these settings, and also serves to prove the accuracy of the instrument and as an aid in adjusting it. By shifting the pole weight, which is smooth underneath, the measuring wheel can be easily set to zero. The different parts of the instrument are adjustable and provided with set-screws, so that corrections can be made for instrumental errors.

\section*{F.Weberco. L \(P\) \\ H I A BALTIMORE}

\section*{PLANIMETERS AND INTEGRATORS (Continued)}

\section*{COMPENSATING PLANIMETERS}


No. \(4313 \frac{1}{2}\)
No.
\(4313 \frac{1}{2}\) Compensating Planimeter, same as No. 4313, but with improved Ball Pole weight
The Ball Pole of the Planimeter, shown in Figure 4313立, represents the most perfect form of poles. It has various advantages over the needle pole, the only slight disadvantage being the somewhat larger case required by it. Instead of the point projecting from the weight p, there is a small ball, which fits into a receptacle in a heavy rectangular metal block \(S\). When operating the Planimeter, this block is kept in its place by its own weight. By pushing the block into the requisite position, the reading of the roller may be made zero and the most favorable position of the instrument may easily be obtained, before beginning a measurement.

No. 4314 (Pole Arm)
No.


4314 Compensating Planimeter, like No. 4313, but with adjustable pole arm
The adjustable pole arm, about \(9 \frac{1}{2}\) inches, bears index marks for the different settings furnished with the instrument, and can be adjusted so that when the instrument is used with the pole inside of a figure, the constant is a round number, 20,000 , for any setting. The instrument is used in the same way with the pole inside as with the pole outside, and by tracing the figure with the pole on the right and on the left of the tracer arm (about 9 inches) and taking the mean of the readings, large areas can be measured with great accuracy. The extensibility of the pole arm and the great range of the tracer arm permit of measuring very large figures with the pole outside. By reducing the length of the pole and tracer arms, the instrument can be used on a very small space. No.
\(4314 \frac{1}{2}\) Compensating Planimeter, like No. 4314, but with improved Ball
Pole weight and adjustable pole arm
Each
arm ...............................
Note.-Compensating Planimeters, Nos, 4313 to \(4314 \frac{1}{2}\), inclusive, can be equipped with a device for adjusting the parallelism of the axis, by the user. Price, extra,
each.

\section*{PLANIMETERS AND INTEGRATORS (Continued)}

\section*{"UNIVERSAL" COMPENSATING PLANIMETER}

For Circular and Rectangular Recording Instrument Charts


The Universal Planimeter is designed for the computation of areas and the determination of the mean ordinate of diagrams of self-recording instruments, drawn on either strips or circular charts. The instrument is essentially a compensating planimeter with a fixed tracer arm and a value of vernier unit of 0.02 sq. in., having a range of tracing equal to the area of a ring, formed by two concentric circles of 5 inches and 29 inches diameter, respectively.

In using the Universal Planimeter as a radii averaging instrument, the vernier unit is 0.0004 inches and the range of tracing equal to a ring, formed by two circles of 1 inch and 13 inches, respectively. The center stud, over which the circular charts are put, has a diameter of \(\frac{1}{2}\) inch.

No. 4314 U In fine morocco-covered case, \(10 \times 3 \frac{1}{2} \times 2\) inches, with directions. Price, each.

\section*{UNIVERSAL PLANIMETER WITH ROLLER}

By connecting the tracer arm of Universal Planimeter, No. 4314 U , with a heavy brass roller, the instrument can be used as a rolling Planimeter. The roller can be very conveniently connected with the tracer arm, allowing then of measuring areas of any length up to 11 inches wide.


No.
4314 UR Complete, with roller, pole arm, punch and instructions, in fine case. .

\section*{F.WEBERCO, \(\quad \mathrm{P}\) ST. LOUIS I H A D E L PALTIMORE}

PLANIMETERS AND INTEGRATORS (Continued)

\section*{WEBER-OTT ROLLING DISC PLANIMETER \\ Precision Type}


No.
No. 4317
4317 Weber-Ott Rolling Disc Planimeter, adjustable tracer arm, fully graduated, with micrometer adjustment, adjustable for values of the vernier unit of \(2 \mathrm{~mm} .^{2}\) to \(0.4 \mathrm{~mm} .^{2}\) (from 0.0032 square inch to 0.0005 square inch). In polished hardwood case, with test rule, table of settings for English measure and pamphlet of directions; case fitted with lock and key and carrying handle. Price
Size of box about \(14 \times 12 \frac{1}{2} \times 6 \frac{1}{2}\) nches. Weight of instrument about 4 lbs ., in case, 10 lbs .

The rolling disc planimeter combines the features of the rolling sphere planimeter and the disc polar planimeter; the integration parts (sphere and cylinder) are replaced by somewhat less intricate parts (disc and roller). The maximum area that can be measured in one operation with the rolling disc planimeter is a rectangle of any desired length, width not exceeding the length of the adjusted tracer arm, or a maximum of 50 centimeters ( \(19 \frac{3}{2}\) inches). This planimeter is particularly useful for measuring long indicator diagrams, with rectanguar ordinates.

The above illustration represents the instrument about one-third actual size. The distance between the two rollers is 17 cm . ( \(6 \frac{3}{4}\) inches), so that diagrams of indicators (Wattmeters, steam gauges, etc.) up to a width of 17 cm . ( \(6 \frac{3}{3}\) inches) and any desired length can be measured without the rollers touching the paper. The aluminum disc, which is covered with paper, is fixed on a vertical axis, which can be easily turned between two pivots; the smalltoothed wheel on the axis, engages automatically, i e., elastically, in the gearing of the measuring roller, so that no obstruction or deviation from the rectilinear traveling of the running roller is caused owing to dust or other extraneous matter which may get in between the gearing. The measuring roller and its frame are similar to those of the disc polar planimeter; the gear wheel indicates up to 100 revolutions of the measuring roller. The tracer arm, its graduation, length and arrangement, and the values of the vernier units of the measuring roller are the same as in the large rolling sphere planimeter. The handling is exacty the same as for that instrument.

\section*{FLAT BOXWOOD AND WHITE EDGE SCALES}

\author{
Made of Fine, Carefully Selected Boxwood. Engine Divided, U. S. Standard
}

The white edges are of heavy white celluloid, inlaid in such a maner as to insure their remaining fast to the scale. Engine divided. Guaranteed accurate.


No. 4325

\section*{FLAT BOXWOOD}

Flat Scales, divided \(\frac{1}{8}, \frac{1}{4}, \frac{1}{2}\) and 1 inch to the foot
No.
4325
Boxwood, 6 inches
Each
4326
4327
4328
4329 12 " \(12 \frac{1}{2}\)..
" 18

24 ."

\section*{FLAT SCALES (Continued)}

\section*{FLAT SCALES}


No. 4355

FLAT SCALES. OPPOSITE BEVEL

No,
Each
4355 Boxwood, 12 inches, divided \(\frac{1}{8}, \frac{1}{4}, \frac{1}{2}\) and 1 inch to the foot .......
4356
4357
4358
4359
4360


\section*{CHAIN SCALES}


No. 4368

FLAT POLISHED BOXWOOD

No.
4368 Boxwood, 12 inches, \(10 \times 50\) parts to the inch
4369
4370
4373
" 12 " \(20 \times 401\)
" 12 " \(30 \times 60\)
" 12 " \(80 \times 100\)


\section*{FLAT SCALES (Continued)}

FLAT SCALES


No. 4381
FLAT WHI'LE EDGE BOXWOOD CHAIN SCALES
No.
4381 White Edge, 6 inches, \(10 \times 50\) parts to the inch
4382
4383
4386
4387
4388
4389
4390
4393
\begin{tabular}{llr}
\("\) & \("\) & 6 \\
\("\) & \("\) & 6 \\
\("\) & \("\) & 6 \\
\("\) & \("\) & 12 \\
\("\) & \("\) & 12 \\
\("\) & \("\) & 12 \\
\("\) & \("\) & 12 \\
\("\) & \("\) & 12
\end{tabular}
\(20 \times 40\) ". " ".


Foot Divided Decimally
No. White
4394 White Edge, 12 inches, \(100 \times 500\) parts to the inch \(\begin{array}{llllllllll}4396 & \text {. } & \text {. } & 12 & \text { " } & 300 \times 600 & \text {." } & \text {. } & \text { " } & \text {. } \\ 4397 & \text {. } & \text {.. } & 12 & \text {. } & 800 \times 1000 & \text {. } & \text {. } & \text { " } & \text { " }\end{array}\) \(800 \times 1000\) " " " " \(\quad . . . \ldots\)...................

FLAT METRIC SCALES

No.
4420
4421
4422
4423

Boxwood, 10 centimeters
20
30 " 50
WHITE EDGE FLAT METRIC SCALES
No.
4425 White Edge, 10 centimeters
\(\begin{array}{lllll}4427 & \text { " } & \text { " } & 30 & \text { ". } \\ 4428 & \text { " } & \text { " } & 50 & \text { " }\end{array}\)
FLAT SCALES, BEVELED ON BOTH SHDES


No. 4430
FLAT POLISHED BOXWOOD
Divided \(\frac{1}{8}, \frac{1}{4}, \frac{1}{2}, 1, \frac{3}{8}, \frac{3}{4}, 1 \frac{1}{2}\) and 3 inches to the foot
No.
4430
4431
4432
4433
Boxwood, 6 inches

\section*{F.WEBERCO}

\section*{FLAT SCALES (Continued)}

FLAT SCALES, WHITE EDGE
Beveled on Both Sides


FLAT WHITE EDGE, BEVELED BOTH SIDES
Divided \(\frac{1}{8}, \frac{1}{4}, \frac{1}{2}, 1, \frac{3}{8}, \frac{3}{4}, 1 \frac{1}{2}\) and 3 inches to the foot
No.
4437 White Edge, 6 inches
4438
4439 4440

VEST POCKET SCALES
In Leather Sheaths


No. 4437 A
FLAT WHITE EDGE BOXWOOD
In Leather Sheaths
Narrow, about 15 inches wide

\section*{BOXWOOD PLOTTING SCALE}


No. 4460

FLAT SCALES (Continued)

\section*{PROTRACTOR SCALES}


No. 4461
No. 4461 4462

Protractor Scales, 6 inches long, Boxwood \(6 \times 1^{3}\) in \({ }^{2}\) Ivory; Square Ivory Protractor, \(6 \times 1 \frac{18}{3} \mathrm{in}\)., whole degrees. Scales: \(\frac{7}{\frac{1}{2}, \frac{1}{2}, \frac{3}{4}, 1} 1\) inch to the foot; Scale of Chords, Scales of 25, 30, 35, 40, 45 parts per inch, Diagonal Scales..
4463 Protractor Scales, 6 inches, Ivory, extra heavy; Square Ivory Protractor, \(6 \times 1 \frac{13}{\frac{3}{4}} \mathrm{in}\)., whole degrees. Scales: \(\frac{1}{8}, \frac{1}{3}, \frac{1}{8}, \frac{1}{2}, \frac{5}{8}, \frac{2}{3}, \frac{7}{6}, 1\) inch to the foot; Scale of Chords, Diagonal Scales, Scales of 30, 35, 40, 45, 50, 60 parts per inch \(\qquad\)
\(\qquad\)
ONE BEVEL BOXWOOD SCHOOL SCALES
Boxwood. One Edge Beveled. With But One Division on Each Scale


\section*{No. 4465 A \\ 12 inches long}


\section*{SPECIAL SCALES}

We are equipped to make scales, either flat or triangular, with special graduations, at short notice. Finished in every way equal to our stock, at moderate prices. Submit sketch with order.

\section*{BRISTOL BOARD OR PAPER SCALES}

\section*{With But One Division on Each Scale; 19 Inches Long}

FLAT SCALES (Continued)

\section*{TRANSPARENT CELLULOID, FLEXIBLE PROTRACTOR SCALES}


No. 4468/1 For Civil Engineers and Surveyors, Divided 10 and 20 Parts to the Inch


No. 4468/4 For Architects and Mechanical Engineers, Divided \(\frac{1}{8}, \frac{1}{4}, \frac{1}{2}, 1\) inch to the foot


No. 4468/5 For Students of Mathematics, Schools, Etc., Divided 8ths, 16ths, 32ds; Centimeters

\section*{ILLUSTRATIONS ONE-HALF SIZE}

These Scales are made of transparent celluloid of just sufficient thickness to be perfectly flexible. Lines can be drawn parallel with, or at any desired angle to each other without measuring. Civil and Mechanical Engineers, Surveyors and Architects will find them very convenient for recording field notes and making sketches. Price, Each.

SPHINX TRIANGULAR BOXWOOD AND WHITE EDGE SCALES

Made of fine, selected, thoroughly seasoned Boxwood. The White Edges of heavy celluloid are attached, or inlaid, in such a manner as to prevent ther separation from the stock. Graduations guaranteed accurate.

Engine Divided
U. S. Standard


No. 4471

\section*{For Architects and Mechanical Engineers TRIANGULAR BOXWOOD}

Graduated, \(\frac{3}{32}, \frac{3}{16}, \frac{1}{8}, \frac{1}{2}, \frac{3}{3}, \frac{1}{2}, \frac{3}{3}, 1,1 \frac{1}{2}, 3 \mathrm{in}\). to the foot, and one edge inches to 16 ths, \({ }_{4}{ }^{\text {No. }}\)
4471 " 12 "

Graduated, \(\frac{1}{8}, \frac{1}{4}, \frac{1}{2}, 1, \frac{3}{8}, \frac{3}{3}, 1 \frac{1}{2}, 2,3,4 \mathrm{in}\). to the foot, and one edge inches to 16 ths. 4474
```

Boxwood, 6 inches
18 "

```

4475
4476
No.
4471 P Boxwood, 12 inches, graduated, \(\frac{3}{8}, \frac{3}{3}, 1 \frac{1}{2}, 3, \frac{1}{8}, \frac{1}{3}, \frac{1}{2}, 1\) inch to the
Each
foot; one edge full divided inches to toths; another full divided


For Architects and Mechanical Engineers TRIANGULAR WHITE EDGE
Graduated, \(\frac{-3}{\frac{3}{2}}, \frac{3}{18}, \frac{1}{8}, \frac{1}{2}, \frac{3}{8}, \frac{1}{2}, \frac{3}{3}, 1,1 \frac{1}{2}, 3 \mathrm{in}\). to the foot, and one edge inches to 16 ths. No.
4480
White Edge, 6 inches
Each
4481
4482
18 "
Graduated, \(\frac{1}{8}, \frac{1}{4}, \frac{1}{2}, 1, \frac{7}{8}, \frac{3}{3}, \frac{1}{2}, 2,3,4 \mathrm{in}\). to the foot, and one edge inches to 16 ths,
No.
4485
White Edge, 12 inches
Each
4486
SPECIAL TRIANGULAR BOXWOOD SCALES for COLLEGES
AND HIGH SCHOOLS MADE TO ORDER

\section*{TRIANGULAR SCALES (Continued)}

TRIANGULAR WHITE EDGE


Improved Shape, With Relieved Facet


SCALE GUARD


No. 4495
No.
4495 Scale Guard, German silver, constructed to show the side of scale in use

\section*{JAPANNED TIN SCALE CASES}

No.
4497 Japanned Tin Scale Cases. Very convenient for students to carry scale, erasers, pencils, pens, thumb tacks, etc. Inside dimensions \(12 \frac{1}{2}\) inches high, \(1 \frac{1}{3}\)-inch diameter, with slip cover, \(2 \frac{1}{2}\) inches deep. Edges hemmed. Japanned dull olive green

TRIANGULAR BOXWOOD SCALES
Engine Divided. U, S. Standard


No, 4501
For Civil Engineers and Surveyors
Graduated, \(10,20,30,40,50\) and 60 parts to the inch
\(\qquad\)
" \(\quad 18\)

TRIANGULAR SCALES (Continued)

\section*{TRIANGULAR BOXWOOD SCALES}

Graduated, 20, 30, 40, 50, 60 and 80 parts to the inch

\section*{TRIANGULAR WHITE EDGE SCALES}


No. 4511
For Civil Engineers and Surveyors
Graduated, \(10,20,30,40,50\) and 60 parts to the inch
\({ }^{N} \mathrm{~N}\),
4511
4512

4515

White Edge, 6 inches
12 " " 18 "

Graduated, \(20,30,40,50,60\) and 80 parts to the inch
\({ }_{4514}^{\text {No. }} \begin{aligned} & \text { White Edge, } \\ & 4512\end{aligned}\) inches
parts to the foot
Each
\(\qquad\)
\(\qquad\)
.
Each pats the fool.
graduated \(100,200,300,400,500\) and 600

4516

TRIANGULAR WHITE EDGE SCALES
Improved Shape with Relieved Facet
For Illustration of Shape, See No. 4481 C


\section*{TRIANGULAR METRIC SCALES}

Graduated, .01, .02, .03, .05, .025, and .0125 .
No.


\section*{SPECIAL SCALES}

Our modern facilities enable us to make scales, with special graduations, at short notice. Submit sketch with order or inquiry. Prices moderate.

\section*{FLAT SCALES IN SETS}

In Partitioned Mahogany Boxes


For Architects and Mechanical Engineers
No. 4540 and No. 4541 have a differtnt scale on each edge; both edges are divided and figured to read both ways.
No.
4540 Set of 4 Boxwood Scales, 12 in . Divided \(\frac{1}{8}\) and \(\frac{1}{4}, \frac{1}{2}\) and \(1, \frac{3}{8}\) and \(\frac{3}{4}\)
\(\frac{1 \frac{1}{2}}{}\) and 3 inches to the foot .....................................................
4541 Set of 4 White Edge Scales, 12 in. Same graduations as No. 4540. .
Nos. 4546 to 4553 have same scale on both edges; one edge is divided and figured to read from left to right and the other from right to left.
4546 Set of 4 Boxwood Scales, 12 in . Divided \(\frac{1}{8}, \frac{1}{3}, \frac{1}{2}\) and 1 inch to the
4547 Set of 4 White Edge Scales, 12 in. Same graduations as No. 4546 .
4548 Set of 8 Boxwood Scales, 12 in . Divided \(\frac{1}{3}, \frac{1}{3}, \frac{1}{2}, 1, \frac{2}{8}, \frac{3}{4}, 1 \frac{1}{2}\) and 3 inches to the foot
4549 Set of 8 White Edge Scales, 12 in. Same graduations as No, 4548 ..
4550 Set of 12 Boxwood Scales, 12 in . Divided \(\frac{1}{6}, \frac{1}{4}, \frac{1}{2}, 1, \frac{3}{8}, \frac{3}{4}, 1 \frac{1}{2}, 3,2,4\),
6 and 12 inches to the foot
4552 Set of 12 White Edge Scales, 12 in . Same graduations as No. 4550 , 3,6 and 12 inches Scales, 12 in . Divided \(3^{3}\), \(\frac{1}{8}, \frac{3}{18}, \frac{1}{4}, \frac{3}{8}, \frac{1}{2}, \frac{3}{3}, 1,1 \frac{1}{2}\),
4553 Set of 12 White Edge Scales, 12 in . Same graduations as No. 4552 ,

\section*{CHAIN SCALES IN SETS}

\section*{For Engineers}

In set numbers 4554 and 4554 W each scale has two different divisions, one on each edge, each of which is numbered to read both ways.
No.
4554 Set of 4 Boxwood Scales, 12 in. Divided 10, 20, 30, 40, 50, 60, 80 Per Set 100 parts 4554 W Set of 4 White Edge Scales, 12 in. Same graduations as No. 4554 ,

In set numbers \(4555,4555 \mathrm{~W}\) and 4556 W each scale has only one division, the same on both edges, and is numbered to read both ways on each edge.

\section*{METRIC SCALES IN SETS}

No.
Per Set
4560 Set of 6 Boxwood Scales, 30 cm . Divided metric measure .01, .02, \(.03, .05, .025, .0125\)
4560 W Set of 6 White Edge Scales, 30 cm . Same graduations as in set No. 4560

Sets of Scales with Other Divisions Made to Order

\section*{ENGINEERS' POCKET FOLDING RULES}

Of the Very Finest Quality, Not to be Confused with the Majority of Cheaper Rules Now on the Market
These rules are made of a flexible and light wood, prepared in a manner to prevent shrinkage, hence they are accurate. They are constructed much thinner than the old-style rules and without the sharp metal edges, and are, therefore, more convenient to carry in the pocket.

Rules Nos. 4580 to 4580 W are provided with spring joints with hidden rivets. When opened the rule is held in a straight line, thus making it especially useful measuring vertical and horizontal lines. The ends have brass tips firmly attached.


No. 4582
HARDWOOD, YELLOW POLISHED, SPRING JOINTS, HIDDEN RIVETS, METAL TIPS

All Rules Are Divided on Both Sides, and Read From Right and Left
6 -inch Joints, \(\frac{5}{8}\) inches wide
No.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline 4580 & 2 & feet & rin & hts, & etal & tips, & 4 & folds. & Div'd & \(\frac{1}{16 \times 1} \frac{1}{16}\) & in. & \\
\hline 4581 & 3 & " & & * & " & " & 6 & * & " & \(\frac{1}{10} \times\) & a & \\
\hline 4582 & 4 & " & " & . & " & * & 8 & . & " & 1 \(\times\) ? & " & \\
\hline 4583 & 5 & " & " & " & " & " & 10 & " & " & \(\frac{1}{16} \times \frac{1}{18}\) & " & \\
\hline 4584 & 6 & " & " & " & " & " & 12 & * & " & tox & " & \\
\hline 4585 & 8 & " & " & * & " & " & 16 & " & " & 101 & " & \\
\hline 4586 & 4 & " & " & " & " & " & 8 & " & " & ) & & \\
\hline
\end{tabular}
\(4586 \frac{3}{4} 6\) feet, spring joints, metal tips, 12 folds. Div'd \(\frac{1}{18}\) in. \(x \mathrm{~mm} . . .\).
\(4586 \frac{1}{2} 4\) feet, spring joints, metal tips, 8 folds. Div'd \(\frac{1}{\text { ㅌ }}\) in. \(\mathrm{x} .1 / 100 \mathrm{ft}\).
\(4586 \pm 6\) feet, spring joints, metal tips, 12 folds. Div'd \(\frac{1}{10}\) in. \(x 1 / 100 \mathrm{ft}\).

\section*{VEST-POCKET SIZE FOLDING RULES}

Yellow Polished, 4 -inch Joints, \(\frac{3}{8}\)-inch Wide. Metal Tips


No. 4587
\(\qquad\)

\section*{BOXWOOD POCKET RULES}


\section*{Nos. 4602 and 4606}


No.
No. 4611
Each
4611 Pocket Rule, Boxwood, with Caliper, 1 foot, 4 folds, Brass-Bound Edges
4612 Pocket Rule, Ivory, with Caliper, \(\frac{1}{2}\) foot, 2 folds, German-silver Mountings


4614 Architects' Scale Rule, with beveled edges, Boxwood, 2 feet, 4 folds, Brass Mountings with scales, on beveled edges
4615 Architects' Scale Rule, with beveled edges, Ivory, German-silver mounted, 2 feet, 4 folds, with scales on beveled edges

\section*{COMBINATION FOLDING POCKET RULE}


The Combination Folding Pocket Rule is made of spring German－silver， accurately and distinctly graduated；it can be used as a Hook－rule，Caliper－ gauge，Protractor，Triangle or Tri－square．The upper edge is graduated in 32 nds，the lower edge in 16ths．The Caliper－blade is graduated in 16 ths on one side and 32 nds on the other．The Protractor is divided in five degrees and the Vernier reads to one－half degree．

This handy and indispensable rule can be set to any desired angle，and the center joint is so constructed that the rule remains firm wherever set．

No． 46086 inches long， 2 folds．Price \(\qquad\)

\section*{flat steel RULES}


Made of Thin，Flexible，Tempered Steel，Accurately Divided
No．
4599 A 12 in．，divided \(\frac{2}{18}\) ，\(\frac{1}{32}\) ，晾，in．， \(10,20,50,100\) parts to inch．．．．．Each
4599 B 6 ＂＂\(\frac{1}{18}, \frac{1}{32}, \frac{1}{\frac{1}{4}}, " 10,20,50,100\)
4599 C 4 ＂＂\(\frac{1}{1}\) ，教，支，＂ \(10,20,50,100\)


No．
4599 D 4 in．，divided 32nds and 64ths only ．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．Each
4599 E＂＂＂32nds＂64ths＂
4599 F 6 ＂＂inches to 16 ths， 32 nds， 64 ths，and centimeters to mm ．and \(\frac{1}{2} \mathrm{~mm}\) ．
．．．．．．．． 16 ths， 32 nds， 64 ths，and centimeters to

\section*{P H I L A D E L P H I A St. Louls}

\section*{FLAT SCHOOL RULES}


\section*{No. 4622}

No.
462012 inches, flat, divided inches into 16 ths and \(\mathrm{mm} . \ldots, \ldots\).
462112 " " " 12 " \(4621 \frac{1}{2} 12\) " 12 " 16 ths " " polished, \(4621 \frac{1}{2} 12\) " two bevels, inches to 16 ths, and centimeters to mm .
462212 inches, divided inches into 16ths, with Brass Edge...
462315 " " " " 16ths, " 15 ." ....
\(\begin{array}{lllllllll}4624 & 18 & \text { " } & \text { ". } & \text { ". } & \text { " } 16 \text { ths, } \\ 4625 & 24 & \text { " } & \text { " } & \text {.. } & \text { ". } & \cdots\end{array}\)
462524 " " " " 16ths,
462612 ". flat, polished Maple, with Brass and White Edge, divided inches into 16 ths
462715 inches, flat, polished Maple, with Brass and White Edge, divided inches into 16 ths
462818 inches, flat, polished Maple, with Brass and White Edge, divided inches into 16 ths
See also No. 4465, page 254 .
4630 Yard Stick, 36 inches, divided to 8 ths, plain, varnished
4631 " " " 36 " \({ }^{4}\) "ths, brass tipped, varnished ...
4632 Meter Stick, divided one side millimeters, other side inches to 8 ths, plain, varnished
4633 Meter Stick, divided one side millimeters, other side inches to 8 ths, brass tipped, varnished

\section*{SHRINKAGE RULES}

For Single and Double Shrinkage


No. 4641
These Shrinkage Rules are of hardwood, brass-tipped, about \(1 \frac{1}{2}\) inches wide by \(\frac{1}{8}\) inch thick, and divided to \(\frac{1}{8}, \frac{1}{10}, \frac{1}{12}\) and \(\frac{1}{18} \mathrm{in}\). They are superior to all others in quality, accuracy and finish.

\footnotetext{
No.
4640 Shrinkage Rule, \(24{ }^{2}{ }^{2}=24\) inches
4641
4642
4643
4644
4645
4646
\begin{tabular}{llll}
\("\) & \("\) & \(24 \frac{1}{4}=24\) & \("\) \\
\("\) & \("\) & \(24 \frac{3}{2}=24\) & \("\) \\
\("\) & \("\) & \(24 \frac{1}{2}=24\) & \("\) \\
\("\) & \("\) & 25 & \(=24\) \\
\("\) & \("\) & \(25 \frac{1}{2}=24\) & \("\) \\
\("\) & \("\) & 26 & \(=24\)
\end{tabular}
\(\qquad\)
\(\qquad\)
\(\qquad\)
\(\qquad\)
\(\qquad\)
\(\qquad\)
\(\qquad\)
}

\section*{MEASURING STICKS}


No. 4647
Made of hardwood, polished, brass-tipped, divisions stamped in. About \(1 \frac{3}{4}\) inches wide, \(\frac{1}{4}\) inch thick. Divided feet and inches to 8 ths.
```

No.
4647 A 36 inches long
4647 B 48 " "
4647 C 60 " "
4647 D 72 " "
4647 E 84 " ."

```

\section*{CALIPERS}


Micrometer Caliper
No.
4635 Micrometer Caliper. English measure; range 0 to \(\frac{1}{2}\) inch. With ratchet stop and clamp ring. Price
4635 M Micrometer Caliper, as above, but metric measure; range 0 to 13
4635 M Micrometer Caliper, as above, but metric measure; ran
mm. With ratchet stop and clamp ring. Price .........
Morocco Cases for Micrometer Calipers, Each
4635 M Micrometer Caliper, as above, but metric measure; ran
mm. With ratchet stop and clamp ring. Price .........
Morocco Cases for Micrometer Calipers, Each

\section*{PLAIN CALIPERS}

\section*{Tempered Steel}

No.
4636/O Outside Caliper, 6 inches, Spring Nut and Joint
4636/I Inside Caliper, 6 inches, Spring Nut and Joint

\section*{}

\section*{MAP MEASURES \\ (ROTAMETERS)}

To measure a line the instrument is set to zero, held vertical, and the small projecting wheel is carefully run along the line in one direction. The index hands on the dial indicate the length of the line in feet, inches and eighths of inches.


No. 4648
No.
Map Measure, \(1^{\frac{3}{18}}\)-inch diameter, Watch Pattern, dial with 2 graduations, 12 in . in 8 ths, and 25 feet
4649 Map Measure, 18 -inch diameter, 5 -inch long; with 2 graduations, inches \(=\) miles, and centimeters \(=\) kilometers
4650 Map Measure, Watch Pattern, \(1 \frac{7}{8}\)-inch diameter, 3 dials, registering 100 ft . in feet, inches and 8ths. Nickel-plated case, with resetting device, for setting all hands at zero


No, 4650

TALLY REGISTERS


4655 "Sphinx" Tally Register. For keeping count by pressing on a lever. Nickel-plated. Registers to 999
4656 Same as No. 4655, but registers to 9,999

No. 4649

\section*{STRAIGHT EDGES}

Our straight edges are all stamped with our trade-mark, denoting and guaranteeing their quality, accuracy and genuineness.


No. 4970
No.
4970 Cherry Wood, one edge beveled.
\begin{tabular}{llllllllllll} 
Inches & \(\ldots\) & 15 & 18 & 21 & 24 & 30 & 36 & 42 & 48 & 54 & 60 \\
Each \(\ldots .\). & & & & & & & 72
\end{tabular}


No. 4972
No.
4972 Mahogany, Ebony Lined, square edges. \(\begin{array}{llllllllll}\text { Inches } & \ldots & 18 & 24 & 30 & 36 & 42 & 48 & 54 & 60\end{array}\) Each ....

4975 Transparent Celluloid Lined, mahogany or maple blade, square edges. Inches \(\ldots \ldots . \begin{array}{llllllll} & 18 & 24 & 30 & 36 & 42 & 48 & 54\end{array}\) Each

\section*{STEEL STRAIGHT EDGES}


No. 4976 N
No.
4976 N Steel Nickel-plated.
\begin{tabular}{lllllllrrrr} 
Inches . . & 15 & 18 & 24 & 30 & 36 & 42 & 48 & 54 & 60 & 72 \\
Width . . & 18 & \(1 \frac{18}{8}\) & \(1 \frac{1}{2}\) & \(1 \frac{1}{2}\) & \(1 \frac{3}{3}\) & 13 & 13 & 2 & 2 & 2 \\
\(2 \frac{1}{2}\)
\end{tabular}

\section*{ENGRAVERS' STEEL STRAIGHT EDGES}


No. 4979
No.
No.
4979 Nickel-plated, with Knob, one edge beveled.
Inches
Each
\(\qquad\) 7 8 10 12 14 NOTE.-For straight edges for Parallel Rule Attachment, see next page.
F.WEBERCO.

\section*{ BALTIMORE}

\section*{"SPHINX" PARALLEL RULE ATTACHMENT}

For Drawing Tables and Boards


For Drawing Tables and Boards
This attachment can be put on any board or drawing table. Its arrangement is simple and it can be attached and operated by any one. Works smoothly and evenly, is always parallel, unless set to an angle and develops no lost motion. A great convenience to draftsmen and especially recommended for boards, 42 inches and over.
No.
4980 Price, complete, without straight edge, to fit any size board ......

\section*{In Ordering Always Give Size of Board}

\section*{STRAIGHT EDGES FOR PARALLEL RULE ATTACHMENT In Ordering Always Give Size of Board}

No.
4980-A Mahogany, Ebony Lined.
Sizes, inches .. \(24 \begin{array}{llllllllll} & 30 & 42 & 54 & 60 & 72 & 84 & 96 & 108 & 120\end{array}\)
Price, each
4980-B Mahogany, Transparent Celluloid Lined.
\(\begin{array}{llllllllll}\text { Sizes, inches } & \ldots . . . & 24 & 30 & 42 & 54 & 60 & 72 & 84 & 96\end{array}\)
Price, each
Pencil Ledge attached to Straight Edge, per foot extra.
The straight edges should be ordered from 4 to 6 inches longer than thel board to allow for fitting, to the posts, of thel attachment.
F.WEBERCO \(P\) H I L A D E L P H I A


\section*{FOLDING PARALLEL RULES}


No. 4982
No.
4982 Parallel Rule, Ebony, with Brass Mountings, Beveled Edges
Inches \(\ldots \ldots \ldots \ldots \ldots \ldots \ldots\)............... 6 12 15
Each


No. 4984
No.
4984 Paralle1 Rule, Transparent Celluloid, with Brass Mountings, Beveled Edges. Inches \(\ldots \ldots \ldots \ldots \ldots \ldots . . \begin{array}{llllll} & 6 & 9 & 12 & 15 & 18\end{array}\) Each

\section*{ROLLING PARALLEL RULES}


No. 4986
No.
4986 Ebony, Brass, Nickel-plated Mountings, Beveled Edges. Inche


No. 4990
No.
4990 German Silver, with Ebony Handle, Beveled Edges. Inches Each

\section*{T-SQUARES}

\section*{"SPHINX" T-SQUARES}

All wood for our T-squares is carefully selected and well seasoned. The T-squares will not warp and are guaranteed accurate. Every T-square is stamped with our trade-mark as a guarantee of its genuineness, quality and accuracy.

\section*{CHERRY WOOD}


Made of Best Seasoned Wood
No.
5000 Cherry Wood, Fixed Head.
\(\begin{array}{lllllllllllll}\text { Inches } & \ldots & 15 & 18 & 21 & 24 & 30 & 36 & 42 & 48 & 54 & 60 & 72\end{array}\)
Each......
5001 Cherry Wood, Movable Head.
Inches ................................................ 24
24
36
42
Each

No. 5006


No.
5006 Ashwood Blade, Maple Lined, Walnut Head, Fixed, Shellac Finish. Inches ......... \(24 \quad 30 \quad 36 \quad 42 \quad 48 \quad 54 \quad 60\) 72 Each \(\qquad\)

5007 Ashwood Blade, Maple Lined, Movable Walnut Head, with two fine Brass Milled Head Swivels. \(\begin{array}{lllllllllll}\text { Inches } & \ldots & 24 & 30 & 36 & 42 & 48 & 54 & 60 & 72\end{array}\) Each \(\qquad\)

\section*{T-SQUARES (Continued)}


No.
5008 Mahogany, Ebony Lined, Fixed Head, Shellac Finish (finest quality) \(\begin{array}{lllllllllll}\text { Inches } & \ldots \ldots \ldots & 18 & 24 & 30 & 36 & 42 & 48 & 54 & 60 & 72\end{array}\) Each


The amber is attached in such a manner, that it cannot separate from the wood. The blades will not warp.
No.
5012 Mahogany or Maple Blade, Transparent Celluloid Lined, Walnut Head Shellac Finish. Fixed Head (finest quality).
\begin{tabular}{llllllllllll} 
Inches &.. & 12 & 15 & 18 & 24 & 30 & 36 & 42 & 48 & 54 & 60 \\
\hline
\end{tabular} Each...
5013 Movable Head, with two fine Brass Milled Head Swivels, Shellac Finish. \begin{tabular}{llllllllll} 
Inches & \(\ldots \ldots \ldots l\) & 18 & 24 & 30 & 36 & 42 & 48 & 54 & 60 \\
\hline
\end{tabular} Each


No.
5015 Mahogany, Ebony Lined, Tapered Blade, Beveled Edge on Right-Angle Side, Shellac Finish.
\begin{tabular}{llllllll} 
Inches \(\ldots \ldots \ldots \ldots\) & 30 & 36 & 42 & 48 & 54 & 60
\end{tabular}

The blades of No. 5015 are tapered and very wide at the base, to prevent spring the further (free) end. The drawing edge is in line with the middle of the head.

\section*{F.WEBERCO. Pr. Hósut L ST. LOUIS BALTIMORE \\ T-SQUARES (Continued) \\ DRAUGHTSMEN'S STEEL BLADE T-SQUARES}


No.

Each
For Engravers' Metal T-squares, see page 158.

\section*{WEED'S PATENT T-SQUARE HOLDER}


No. 5020
The construction of this attachment is so simple and perfect, that it forms a valuable addition to every T-square. The draughtsman is thus relieved of the annoyance of the T-square slipping, which with the attachment is firmly held to the drawing board; also forming a parallel attachment.
\({ }^{\mathrm{Na}} \mathrm{F}\).
5020 Nickel-plated to fit \(2 \frac{3}{3}\) and \(3 \frac{1}{2}\)-inch blade
State Size Desired When Ordering

\section*{BARS FOR BEAM COMPASSES}


No. 5038

Inches
24


No. 5039
\(30 \quad 36\)

Hardwood. Each .....
5039
NOTE-Special shaped bars furnished to order.

\section*{BLACK BOARD SET}


5042 Black Board Set, with Knobs, consisting of T-square, 24 in .; Straight Edge, 36 in.; Protractor, \(15 \frac{1}{2} \mathrm{in}\).; Triangle \(30 / 60\) degrees, 24 in . Per set
5042 S Each piece separately
WOODEN DIVIDERS and BLACK BOARD COMPASSES


No. 5046


No. 5047

No
Each
5045 Wooden Dividers, Maple Wood, 16 in., Rubber Point, for blackboard use
5046 Wooden Dividers, Cherry Wood, Brass Swivels, Steel Points, Extra Quality. Lengths, inches ........................................ 12 Each
5047 Wooden Dividers, Cherry Wood, Brass Swivels, with Arc and Steel Points.
Lengths, inches ........................................ 12
Each

\section*{PERSPECTIVE LINEAD}

No. 5052
No.
No.
\(5052-\) S
5052 -L

\section*{SECTION LINERS}

\author{
"SPHINX" REVERSIBLE SECTION LINER Patented
}


No. 5060
To those familiar with our present style of the "Sphinx" section liner, the advantages of the "Reversible" will be at once recognized.

THE "SPHINX" REVERSIBLE SECTION LINER, while similar in appearance at first glance, to the old "Sphinx" liner, has the following variations or changes in construction, and advantages. It is reversible, that is, it operates both from left to right, and from right to left. The bar is stationary and the whole liner occupies but a space on the drawing board \(8 \frac{\mathrm{i}}{\mathrm{in}} \mathrm{in}\). long. The arm is perfectly rigid. An extra strong steel spring, clutches the carriage firmly at any point along the bar, so that there is positively no lost motion in any of its parts, although the pinching together of either left or right post and the lever, as is explained hereunder, forces it evenly and smoothly forward the distance of the setting.

The double beveled 7 -inch rule of heavy transparent celluloid is another added improvement, permitting at all times a clear view of the drawing above the base.

The base of highly polished hardwood, the metal parts of hard spring brass, heavily nickeled, lend to the instrument a beautiful appearance in keeping with any surrounding and particularly appealing to the fastidious draughtsman. Two fine steel pin points in the under side of the base serve to hold the liner in position on the drawing board.

Directions.-In operating, let us say from left to right, bring the car, by means of pressure, to the left-hand end of the base. Set the left indicator to the desired spacing, clamp firmly. Place the forefinger of the left hand on the knurled knob, the thumb on the lever. Press together, releasing first forefinger, then the thumb. In reversing, or in this case, operating from right to left, set to the desired spacing, by means of the right-hand indicator, proceed as before.

The advantages of this liner over all others heretofore on the market must be immediately apparent to one having use for such an instrument and the slight increase in the price, cannot be a factor worth considering to any one desiring a perfected tool.
No,
5060 Packed in cardboard box ............................................ \(5060 \frac{1}{2}\) "Sphinx Reversible" Section Liner, same as No. 5060 , but with 15inch Transparent Amber Blade, for Photo-Engravers ........ Each,

\title{

}

\section*{SECTION LINERS (Continued)}

\section*{THE "SPHINX" SECTION LINER}

Strong, Simple and Durable

Patented


No, 5062
Great range of work, allowing spaces from \(\frac{1}{100}\) to \(\frac{1}{2}\) inch at any angle with out changing position.

Retains its place on the board by means of pins in the bottom of base and without the aid of \(T\)-square, straight edge, hands or weights.

A practical instrument at a reasonable price, adapted to the needs of draughtsmen and pupils in mechanical and architectural drawing classes. No.
5062 "Sphinx" Section Liner, 7-inch Transparent Celluloid Rule and Nickel-plated Mountings, in cardboard box ............................. \(5062 \frac{1}{2}\) Same as No. 5062 , but with 14 -inch Rule \(\qquad\)
NOTE.-To guard our patrons from buying an imitation of our Patent Liners and thereby infringing on our rights, we stamp both our "Sphinx" Section Liners with our Firm's name.

7


9

10

12

\footnotetext{
Examples of Work That Can be Done With "Sphinx Section Liners"
}

TERRY'S SECTION LINER


Patented
Each
No.
5064 Terry's Section Liner, with 7-inch Mahogany, Celluloid Lined Rule on heavy metal base plate, with pins on bottom................... 5065 Terry's Section Liner, with 12 -inch Mahogany, Celluloid Lined Rule, with brace attachment.

\section*{RIEFLER'S SECTION LINER}


No. 5066
Riefler's New Section Liner for drawing parallel lines equidistant and with adjustable spacing.

The base P-P is provided with a groove in which the rack Z-Z slides; every pressure on the lever H moves the slide with the ruler L , to the right, one space of the pitch of the rack; the needle point and screws S-S, in the base secure the apparatus on the drawing board.

The width of the ruling depends on the width of the angle between the ruler L and the slide \(\mathbf{Z - Z}\). The ruler L is held in A and can be set to the angles required for ruling \(\frac{1}{4}, \frac{1}{3}, \frac{1}{2}, \frac{2}{2}, 1,1 \frac{1}{4}, \frac{1}{2} \mathrm{~mm}\). apart, by means of arm B.

When the apparatus is run out to the right it can be reset for work by either pulling the slide out to the right and re-inserting it at the left side, or by releasing the sprawl from the rack by pressing on the screw \(\mathbf{V}\), and moving the whole slide back to the left end.

This Section Liner gives excellent and accurate results, the handling is very simple and easy, requires neither practice or special ability,

It is made of German Silver, best workmanship, and forms an elegant addition to the drafting tools.
No.
5066 Riefler's Section Liner, German Silver, Arm \(8 \frac{1}{2}\) inches, in case ....

\section*{TRIANGLES}

The wooden Triangles are made from selected and thoroughly seasoned pearwood by expert workmen, and are guaranteed as to correctness and durability.


No. 5082


No. 5083

No.
5082 Pearwood Triangles, Open Centre, \(45^{\circ} \times 45^{\circ}\).
Inches ........................ 6 Each \(\qquad\)
5083 Pearwood Triangles, Open Centre, \(30^{\circ} \times 60^{\circ}\). Inches ............................. 8
\(\qquad\) \(9 \quad 10\) 12

\section*{Each}

\section*{"SPHINX" TRANSPARENT CELLULOID TRIANGLES}

\section*{Made of Clearest Stock, Guaranteed Accurate}

Every angle bears our Trade-mark, authenticating its Quality, Accuracy and Genuineness.

\section*{Standard Thickness}


No. 5110

No. 5111

\(221 / 2 \times 6712^{\circ}\)

No. 5112


No.
Transparent Celluloid Triangles, Open Centre, \(45^{\circ} \times 45^{\circ}\). Inches Each \(\qquad\) .................... \(\begin{array}{llllllllll}\text { Transparent Celluloid Triangles, Open Centre, with Finger Lifts, } & 45^{\circ} \times 45^{\circ} \\ \text { Inches } & 6 & 8 & 10 & 12 & 14 & 16 & 18\end{array}\) Each \(\qquad\)
\(\qquad\)

\section*{5110} Transparent Celluloid Triangles, Open Centre, with Finger Lifts, \(30_{8}^{\circ} \times 60^{\circ}\). Each \(\qquad\) Transparent Cellubid Triangles, \(22 \frac{1}{2}^{\circ} \times 67 \frac{1}{2}^{\circ}\), in the principal sizes, at prices of corresponding sizes, \(45^{\circ}\).

\section*{FWEBERCO. P H I L A D E L P H I A ST. LOUIS}

\section*{METAL TRIANGLES}


No. 5117


No. 5118

No.
5117 German-silver Triangles, Open Centre, with Flat Ivory Buttons to raise the angle from the drawing surface, \(45^{\circ} \times 45^{\circ}\).
Inches ............................ \(4 \quad 5 \quad 5 \quad 6 \quad 8 \quad 10\) Each \(\qquad\)
5118 German-silver Triangles, Open Centre, with Flat Ivory Buttons to raise the angle from the drawing surface, \(30^{\circ} \times 60^{\circ}\). Inches ............................ 6 Each

\section*{LETTERING TRIANGLES}


No. 5121
Per Set
No.
5121 Lettering Triangles, Transparent Celluloid, \(3 \frac{1}{2}\) inches, 3 in a set ..


No. 5122
Amber Lettering Templets, 3 in a set

\section*{ROOF PITCHES AND EMBANKMENTS}

\section*{Of Transparent Celluloid}

Each PerSet
No.
5112 For Roof Pitches, 6 in. high, \(\frac{3}{2}, \frac{1}{3}, \frac{1}{3}, \frac{1}{3}, \frac{7}{6}, \frac{1}{6}\) in. Pitch. In sets of 6
5113 For Embankments, 6 in , high, 1 in , to \(1,1 \mathrm{in}\), to \(1 \frac{3}{2}, 1 \mathrm{in}\), to 2, 1 in . to \(2 \frac{1}{2}\) Double Slope ( 1 in , to \(4,1 \mathrm{in}\). to 6 ), ( 1 in . to
\(8,1 \mathrm{in}\), to 12 ). In sets of 6 .

\section*{20 \\ }
"SPHINX" IRREGULAR CURVES
Illustrations Apply to Wood and Transparent Celluloid Curves
"Sphinx" Curves are made with the utmost care and precision. Every curve is guaranteed and bears our Trade-mark, signifying its Quality, Accuracy
and Genuineness.


No.
5195
5197 Tarwood illa..Each
5197 Transp. Celluloid.. .
Nos. . . . . . . . . . . . . . . . . .
Inches
5195 Pearwood ……Each,
5197 Transp, Celluloid.
Nos. ....................
Inches ...................
5195 Pearwood ........Each,
5107 Transp. Celluloid.


No. 5186
No.
5186 Combination Curve, Transparent Celluloid

LOGARITHMIC-SPIRAL CURVE


No. 5188
Mathematically correct; all curves within the limit of its size can be made with it.
5188 Spiral Curve, Transparent Celluloid
Each
\(\qquad\)
HYPERBOLAS, ELLIPSES AND PARABOLAS


No. 5200


No. 5201


No. 5203

5200
5201
5202
5203
5204

Hyperbolas, 8 to set, 2 Ellipses, 6 " " 2


\section*{ADJUSTABLE CURVE RULERS}


No. 5207
Can be instantly adjusted and retained to any form or curve. The working edge is made rounded, so that by slightly inclining the pencil two or more parallel curves can be drawn without moving the ruler.

No.
Each
5207
Curve Ruler \(14 \frac{1}{2}\) inches long, ruling edge 10 inches


No. 5208

No.
Each
5208 Curve Ruler, 30 inches long, ruling edge 30 inches \(\qquad\)


No. 5209
In construction Nos. 5209-5210 rulers closely resemble the regular No. 5207, but lighter construction. It is provided with sliding lead and steel ribbons, and will retain any shape to which it is bent.


\section*{SPLINES WITH GROOVE}

\section*{ \\ No. 5210}

No.
5210 Transparent Celluloid Splines.
Lengths, inches \(\ldots . \quad 12 \quad 18 \quad 24\)
Each
5212年 Pearwood Splines.
Lengths, inches .................... 18 18 \(24 \quad 30\) 36 42 42 48
Each

SPLINE WEIGHTS


No. 5213
No. 5214

No.
Each
5213 Spline Weight, Japanned Iron, with new style finger, about \(4 \mathrm{lbs} .\). .
5214
Lead, with brass finger, about 4 lbs. ..............


5215 Set of Splines and Spline Weights, in strong wooden box. Contains: 4 No. 5214 Spline Weights; 1 each No, 5210 Ambler Splines, \(18,24,30,36,42\) inches; 1 each No. \(5212 \frac{1}{2}\) Pearwood Splines, 12, 18, \(24,30,36,42,48\) inches. Fitted in box to prevent shifting. Per set,

\section*{"SPHINX" RAILROAD CURVES}
"SPHINX" Railroad Curves are Made with the Utmost Care and Precision. Every Curve is Guaranteed Accurate and to Authenticate its Genuineness is Stamped with our Trade-Mark. In Wooden Boxes


No. 5230

\section*{PEARWOOD}

No,
52301 set of 10 curves, viz.: \(12,24,36,48,60,72,84,96,108,120\) inches
5230 radius ........................... \(24,48,60,72,84,96,108,120\) inches
\(5231 \frac{1}{1}\) set of 17 curves, viz.: \(12,15,18,21,24,27,30,33,36,39,42,45\), \(48,51,54,57,60\) inches radius
\(5232 \frac{1}{9 \frac{1}{2}}\) set of 24 curves, viz. \(2,2 \frac{1}{2}, 3,3 \frac{1}{2}, 4,4 \frac{1}{2}, 5,5 \frac{1}{2}, 6,6 \frac{1}{2}, 7,7 \frac{1}{2}, 8,8 \frac{1}{2}, 9\), \(9 \frac{1}{2}, 10,12,14,16,18,20,22,24\) inches radius
52331 set of 43 curves, viz.: \(3 \frac{1}{2}, 4,4 \frac{1}{2}, 5,5 \frac{1}{2}, 6,6 \frac{1}{2}, 7,7 \frac{1}{2}, 8,8 \frac{1}{2}, 9,9 \frac{1}{2}, 10\), \(12,14,16,18,20,22,24,27,30,33,36,39,42,48,54,60,66,72,78,84\), \(90,100,110,120,130,160,180,200\) inches radius

\section*{TRANSPARENT CELLULOID}

No.
Per Set
52351 set of 10 curves, viz.: \(12,24,36,48,60,72,84,96,108,120\) inches radius
\(5236 \frac{1}{1}\) set of 17 curves, viz.; \(12,15,18,21,24,27,30,33,36,39,42,45,48\), \(51,54,57,60\) inches radius
\(5237 \frac{1}{2}\) set of 24 curves, viz.: \(2,2 \frac{1}{2}, 3,3 \frac{1}{2}, 4,4 \frac{1}{2}, 5,5 \frac{1}{2}, 6,6 \frac{1}{2}, 7,7 \frac{1}{2}, 8,8 \frac{1}{2}, 9\), \(9 \frac{1}{2}, 10,12,14,16,18,20,22,24\) inches radius
\(5238 \frac{1}{1}\) set of 43 curves, viz.: \(3 \frac{1}{2}, 4,4 \frac{1}{2}, 5,5 \frac{1}{3}, 6,6 \frac{1}{2}, 7,7 \frac{1}{2}, 8,8 \frac{1}{2}, 9,9 \frac{1}{2}, 10\), \(12,14,16,18,20,22,24,27,30,33,36,39,42,48,54,60,66,72,78,84\), \(90,100,110,120,130,160,180,200\) inches radius

\section*{SEPARATE RAILROAD CURVES}

No.
5233 S Transparent Celluloid


5241 Set of 41 Pearwood Railroad Curves, with Tangent, same assortment as No. 5243, in wooden box \(\qquad\) ............ angent, same assortme....................
5243 Set of 41 Transparent Celluloid Railroad Curves, with Tangent, marked in degrees and inches.
\begin{tabular}{|c|c|c|c|}
\hline \(0^{\circ} 30=114.59 \mathrm{in}\). & \(3^{\circ} 30^{\prime}=16.37 \mathrm{in}\). & \(6^{\circ} 15^{\prime}=9.17 \mathrm{in}\). & \(9^{\circ} \quad=6.37 \mathrm{in}\), \\
\hline \(1^{\circ}=57.30^{\prime \prime}\) & \(3^{\circ} 45^{\prime}=15.28{ }^{\text {" }}\) & \(6^{\circ} 30^{\prime}=8.82\) " & \(9^{\circ} 15^{\prime}=6.20\) " \\
\hline \(1^{\circ} 15^{\prime}=45.84{ }^{\prime \prime}\) & \(4^{\circ}=14.33\) " & \(6^{\circ} 45^{\prime}=8.49 \quad{ }^{\prime \prime}\) & \(9^{\circ} 30^{\prime}=6.04\) " \\
\hline \(1^{\circ} 30^{\prime}=38.20\) " & \(4^{\circ} 15^{\prime}=13.48{ }^{\prime \prime}\) & \(7^{\circ}=8.19\) & \(9^{\circ} 45^{\prime}=5.88{ }^{\prime \prime}\) \\
\hline \(1^{\circ} 45^{\prime}=32.74{ }^{\prime \prime}\) & \(4^{\circ} 30^{\prime}=12.73\) " & \(7^{\circ} 15^{\prime}=7.91{ }^{\prime \prime}\) & \(10^{\circ}=5.74\) " \\
\hline \(2^{\circ}=28.65{ }^{\prime \prime}\) & \(4^{\circ} 45^{\prime}=12.07{ }^{\prime \prime}\) & \(7^{\circ} 30^{\prime}=7,64\) " & \(10^{\circ} 30^{\prime}=5.48\) " \\
\hline \(2^{\circ} 15^{\prime}=25.47{ }^{\prime \prime}\) & \(5^{\circ}=11.46^{\prime}\) & \(7^{\circ} 45^{\prime}=7.40\) & \(11^{\circ}=5.22\) \\
\hline \(2^{\circ} 30^{\prime}=22.92\) & \(5^{\circ} 15^{\prime}=10.92\) * & \(8^{\circ}=7.17\) & \(11^{\circ} 30^{\prime}=4.99\) " \\
\hline \(2^{\circ} 45^{\prime}=20.84{ }^{\prime \prime}\) & \(5^{\circ} 30=10.42\) " & \(8^{\circ} 15^{\prime}=6.95\) & \\
\hline \(3^{\circ}=19.10{ }^{\prime \prime}\) & \(5^{\circ} 45^{\prime}=9.97{ }^{\prime \prime}\) & \(8^{\circ} 30^{\prime}=6.75{ }^{\text {* }}\) & \\
\hline \(3^{\circ} 15^{\prime}=17.63 *\) & \(6^{\circ}=9.55\) " & \(8^{\circ} 45^{\prime}=6.55{ }^{\prime \prime}\) & \\
\hline
\end{tabular}

In wooden box . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Per set,

\section*{SEPARATE RAILROAD CURVES WITH TANGENT}

N C.
Transparent Celluloid, as described above
Each,
5243 S Transparent Celluloid, as described above
5241 S Pearwood, as described above................. \(\qquad\) "

\section*{METAL RAILROAD CURVES}


STANDARD SET NO. 1
100 curves stamped with radius in inches as follows:
\begin{tabular}{llllllllll}
2 & \(4 \frac{1}{2}\) & 7 & \(9 \frac{1}{2}\) & 12 & \(16 \frac{1}{2}\) & \(21 \frac{1}{2}\) & 28 & 38 & 70 \\
\(2 \frac{1}{2}\) & \(4 \frac{3}{2}\) & \(7 \frac{1}{4}\) & \(9 \frac{3}{4}\) & \(12 \frac{1}{4}\) & 17 & 22 & 29 & 40 & 80 \\
\(2 \frac{1}{2}\) & 5 & \(7 \frac{1}{2}\) & 10 & \(12 \frac{1}{2}\) & \(17 \frac{1}{2}\) & \(22 \frac{1}{2}\) & 30 & 42 & 90 \\
\(2 \frac{3}{2}\) & \(5 \frac{1}{2}\) & \(7 \frac{3}{4}\) & \(10 \frac{1}{2}\) & 13 & 18 & 23 & 31 & 44 & 100 \\
3 & \(5 \frac{1}{2}\) & 8 & \(10 \frac{1}{2}\) & \(13 \frac{1}{2}\) & \(18 \frac{1}{2}\) & \(23 \frac{1}{2}\) & 32 & 46 & 120 \\
\(3 \frac{1}{4}\) & \(5 \frac{3}{4}\) & \(8 \frac{1}{4}\) & \(10 \frac{3}{4}\) & 14 & 19 & 24 & 33 & 48 & 140 \\
\(3 \frac{1}{2}\) & 6 & \(8 \frac{1}{2}\) & 11 & \(14 \frac{1}{2}\) & \(19 \frac{1}{2}\) & \(24 \frac{1}{2}\) & 34 & 50 & 160 \\
\(3 \frac{3}{4}\) & \(6 \frac{1}{4}\) & \(8 \frac{3}{4}\) & \(11 \frac{1}{2}\) & 15 & 20 & 25 & 35 & 55 & 200 \\
4 & \(6 \frac{1}{2}\) & 9 & \(11 \frac{1}{2}\) & \(15 \frac{1}{2}\) & \(20 \frac{1}{2}\) & 26 & 36 & 60 & 240 \\
\(4 \frac{1}{4}\) & \(6 \frac{1}{4}\) & \(9 \frac{1}{4}\) & \(11 \frac{3}{4}\) & 16 & 21 & 27 & 37 & 65 & 300
\end{tabular}

\section*{METAL RAILROAD CURVES (Continued)}

No.
Per Set
5239 A 100 Curves (Full Standard Set No. 1)
5239 B 75 " selected "ad lib" from Standard Set No. 1.........
5239 C 50 ."
5239 D 25 "

\section*{STANDARD SET NO. 2}

102 curves stamped in degrees and inches to 100 -foot scale as follows:
\begin{tabular}{|c|c|c|c|c|c|}
\hline \(0^{\circ} 15^{\prime}=229.18\) & \(3^{\circ} 10^{\prime}=18.10\) & \(7{ }^{\circ}\) & \(45^{\prime}=7.40\) & \(14^{\circ}\) & \(15^{\prime}=4.03\) \\
\hline \(0^{\circ} 20^{\prime}=171.89\) & \(3^{\circ} 15^{\prime}=17.63\) & \(8^{\circ}\) & \(=7.17\) & \(14^{\circ}\) & \(30^{\prime}=3.96\) \\
\hline \(0^{\circ} 25^{\prime}=137.51\) & \(3^{\circ} 20^{\prime}=17.19\) & \(8^{\circ}\) & \(15^{\prime}=6.95\) & \(14^{\circ}\) & \(45^{\prime}=3.90\) \\
\hline \(0^{\circ} 30^{\prime}=114.59\) & \(3^{\circ} 30^{\prime}=16.37\) & \(8^{\circ}\) & \(30^{\prime}=6.75\) & \(15^{\circ}\) & \(=3.83\) \\
\hline \(0^{\circ} 35^{\prime}=98.22\) & \(3^{\circ} 40^{\prime}=15.63\) & \(8^{\circ}\) & \(45^{\prime}=6.55\) & \(15^{\circ}\) & \(30^{\prime}=3.71\) \\
\hline \(0^{\circ} 40^{\prime}=85.94\) & \(3^{\circ} 45^{\prime}=15.28\) & \(9^{\circ}\) & \(=6.37\) & \(16^{\circ}\) & \(=3.59\) \\
\hline \(0^{\circ} 45^{\prime}=76.39\) & \(3^{\circ} 50^{\prime}=14.95\) & \(9{ }^{\circ}\) & \(15^{\prime}=6.20\) & \(16^{\circ}\) & \(30=3.48\) \\
\hline \(0^{\circ} 50^{\prime}=68.76\) & \(4^{\circ}=14.33\) & \(9{ }^{\circ}\) & \(30^{\prime}=6.04\) & \(17^{\circ}\) & \(=3.38\) \\
\hline \(0^{\circ} 55^{\prime}=62.60\) & \(4^{\circ} 10^{\prime}=13.75\) & \(9{ }^{\circ}\) & \(45^{\prime}=5.88\) & \(17^{\circ}\) & \(30^{\prime}=3.29\) \\
\hline \(1^{\circ}=57.30\) & \(4^{\circ} 15^{\prime}=13.48\) & \(10^{\circ}\) & \(=5.74\) & \(18^{\circ}\) & \(=3.20\) \\
\hline \(1^{\circ} 10^{\prime}=49.11\) & \(4^{\circ} .20^{\prime}=13.23\) & \(10^{\circ}\) & \(15^{\prime}=5.60\) & \(18^{\circ}\) & \(30^{\prime}=3.11\) \\
\hline \(1^{\circ} 15^{\prime}=45.84\) & \(4^{\circ} 30=12.74\) & \(10^{\circ}\) & \(30^{\prime}=5.45\) & \(19^{\circ}\) & \(=3.03\) \\
\hline \(1^{\circ} 20^{\prime}=42.97\) & \(4^{\circ} 40^{\prime}=12.28\) & \(10^{\circ}\) & \(45^{\prime}=5.34\) & \(19^{\circ}\) & \(30=2.95\) \\
\hline \(1^{\circ} 30^{\prime}=38.20\) & \(4^{\circ} 45^{\prime}=12.07\) & \(11^{\circ}\) & \(=5.22\) & \(20^{\circ}\) & \(=2.88\) \\
\hline \(1^{\circ} 40^{\prime}=34.38\) & \(4^{\circ} 50^{\prime}=11.86\) & \(11^{\circ}\) & \(15^{\prime}=5.10\) & \(21^{\circ}\) & \(=2.74\) \\
\hline \(1^{\circ} 45^{\prime}=32.74\) & \(5^{\circ}=11.46\) & \(11^{\circ}\) & \(30^{\prime}=4.99\) & \(22^{\circ}\) & \(=2.62\) \\
\hline \(1^{\circ} 50^{\prime}=31.25\) & \(5^{\circ} 15^{\prime}=10.92\) & \(11^{\circ}\) & \(45^{\prime}=4.88\) & \(23^{\circ}\) & \(=2.51\) \\
\hline \(2^{\circ}=28.65\) & \(5^{\circ} 30^{\prime}=10.42\) & \(12^{\circ}\) & \(=4.78\) & \(24^{\circ}\) & \(=2.40\) \\
\hline \(2^{\circ} 10^{\prime}=26.45\) & \(5^{\circ} 45^{\prime}=9.97\) & \(12^{\circ}\) & \(15^{\prime}=4.69\) & \(25^{\circ}\) & \(=2.31\) \\
\hline \(2^{\circ} 15^{\prime}=25.47\) & \(6^{\circ}=9.55\) & \(12^{\circ}\) & \(30^{\prime}=4.59\) & \(26^{\circ}\) & \(=2.22\) \\
\hline \(2^{\circ} 20^{\prime}=24.56\) & \(6^{\circ} 15^{\prime}=9.17\) & \(12^{\circ}\) & \(45^{\prime}=4.50\) & \(27^{\circ}\) & \(=2.14\) \\
\hline \(2^{\circ} 30^{\prime}=22.92\) & \(6^{\circ} 30^{\prime}=8.82\) & \(13^{\circ}\) & \(=4.42\) & \(28^{\circ}\) & \(=2.07\) \\
\hline \(2^{\circ} 40^{\prime}=21.49\) & \(6^{\circ} 45^{\prime}=8.49\) & \(13^{\circ}\) & \(15^{\prime}=4.33\) & \(29^{\circ}\) & \(=2.00\) \\
\hline \(2^{\circ} 45^{\prime}=20.84\) & \(7^{\circ}=8.19\) & \(13^{\circ}\) & \(30^{\prime}=4.25\) & \(30^{\circ}\) & \(=1.93\) \\
\hline \(2^{\circ} 50^{\prime}=20.22\) & \(7^{\circ} 15^{\prime}=7.91\) & \(13^{\circ}\) & \(45^{\prime}=4.18\) & & \\
\hline \(3^{\circ}=19.10\) & \(7^{\circ} 30^{\prime}=7.64\) & \(14^{\circ}\) & \(=4.10\) & & \\
\hline
\end{tabular}

No.
Per Set
5239 E 102 Curves (Full Standard Set No. 2)
5239 F 75 " selected "ad lib" from Standard Set No. 2
5239 G 50 "

5239 S Separate Metal Railroad Curves, as Described Above, Each,
F. Weberco. st. Lóuis a d e L baltimore
"SPHINX" COPENHAGEN SHIP CURVES
"SPHINX" Copenhagen Ship Curves are Made with the Utmost Care and Precision. Every Curve is Guaranteed Accurate and to Authenticate its Genuineness is Stamped with our Trade-Mark


For Prices See Next Page

\section*{"SPHINX" COPENHAGEN SHIP CURVES IN SETS}


No. 5247
45 in set, of Hard Wood, from No. 1 to No. 45, complete in wooden box
5248
45 in set, of Transparent Celluloid, from No. 1 to No. 45, complete in wooden box

SEPARATE "SPHINX" COPENHAGEN SHIP CURVES
No.
5245 A Pearwood.

5245 C Transparent Celluloid.
\(\begin{array}{cccc}\text { Nos. } 1 \text { to } 9, & \text { inclusive } \\ \text { " } & 10 & " & 20, \\ \text { " } & 21 & " & 45,\end{array}\) \(\qquad\)
\(\qquad\)


No. 5250
No.
5250 Per set of 10 , of Transparent Celluloid, in wooden box
Per Set

DRAWING MODELS OR GEOMETRICAL BLOCKS

\section*{Made of Wood, Painted White}


No. 5260
Model No.
Sphere, 4 inches diameter
Hemisphere, 4 inches diameter
Circular Plinth, \(2 \times 6\) inches
Cylinder, \(4 \times 8\) inches
Square Plinth, \(2 \times 6\) inches
6 Oblong Block, \(4 \times 3 \times 8\) inches
7 Flight of 3 Steps, 8 inches long, 2 -inch Tread, \(1 \frac{2}{\mathrm{~s}}\)-inch Riser
8 Cubcal Steps, 4 -inch Face
9 Cube, 4 -inch Face
10 Square Prism, \(4 \times 8\) inches
11 Equilateral Triangular Prism, \(4 \times 8\) inches
12 Pentagonal Prism, \(4 \times 8\) inches
13 Hexagonal Prism, \(4 \times 8\) inches
14 Octagonal Prism, \(4 \times 8\) inches
15 Cross, \(2 \times 6\) inches
16 Double Cross, \(2 \times 6\) inches
17 Cone, \(4 \times 8\) inches
18 Double Cone, \(4 \times 8\) inches
19 Triangular Pyramid, \(4 \times 8\) inches
20 Square Pyramid, \(4 \times 8\) inches
21 Pentagonal Pyramid, \(4 \times 8\) inches
22 Hexagonal Pyramid, \(4 \times 8\) inches
23 Right-angled Triangular Prism, \(4 \times 55 \times 8\) inches
23 Right-angled Triangular Prism, \(4 \times 58 \times 8\) inches
24 Ovoid, 4x6 inches
25 Ellipsoid, 4x6 inches
26 Hexagonal Disk, 2x6 inches Diagonal
27 Vase

\section*{DRAWING MODELS IN SETS}

\section*{Especially Selected for Use in the School Room. Packed in Substantial Wooden Box, With Hinged Lid}

Set 5261. Consisting of 10 Models, viz.: Nos. 1, 2, 3, 4, 8, 9, 10, 17,

Set 5262. Consisting of 20 Models, viz.: Nos. 1, 2, 3, 4, 7, 8, 9, 10, 11,
\(12,13,15,17,18,19,20,22,23,24.27\)
. Price per Set,

\section*{Drawing Boards}

In the many years' experience in the manufacture of high-grade drawing boards, we have come to the conclusion that the best wood for this purpose is undoubtedly basswood. The claims of the manufacturers of pine-wood boards, of the superiority of pine over any other wood, will not bear investigation, in so far as bass is concerned. Basswood not only lends itself admirably to the construction of true boards, but owing to its even texture and freedom from heavy, sappy grains presents a better and more useful surface to the draftsman. The thumb tack holes will not, as in pine, stay open, but to a great degree close up. Another good feature of basswood is its non-warping quality when properly seasoned, as against the tendency to warp in even the most thoroughly seasoned white pine.

Our Boards are all guaranteed as to Quality, Workmanship and Accuracy, and to protect our patrons, we stamp every Board with our Trade-mark.


No. 5280
No.
. 5280 Basswood, Board \(\frac{1}{2}\) inch, with plain screwed battens on the back. Screws run in oval slots, with washers, to allow for contraction and expansion of board.
Sizes, inches ................................... 16x21 18x23 20x25
Each


No. 5283
Best Quality Selected Wood
No.
5283 Basswood, Board \(\frac{7}{8}\) inch thick, with end battens, two drawing surfaces.


\section*{DRAWING BOARDS (Continued) \\ EXTRA LARGE DRAWING BOARDS}

These boards are of the best selected, well-seasoned woods, with hardwood battens, screwed on backs. Can be furnished of either white pine, or selected bass. We recommend the latter.
Shipping
\begin{tabular}{c} 
Weight \\
about \\
abo.
\end{tabular}
120 to S290-1 Drawing Board, \(36 \times 72\) in.
\(\qquad\)
\(\qquad\)

155 tb \(5290-6\) 140 tb \(5290-7\) 155 tb 5290-8 175 tb 5290-9 195 tb \(5290-10\) 215 to 5290-11 200 to 5290-12 220 to 5290-13 5290-14 245 to 5290-16 255 tb 5290-17

The Above Prices Cover Crating for Shipment
WEBER'S "UNIVERSAL" DRAWINGgBOARDS For Stretching Paper


The only framed Drawing Board that gives a perfect stretch without using any glue or mucilage, and has the following advantages:

1st. It possesses absolute durability through the mode of constructing the board and attaching the frame.

2nd. The board is unable to get out of angle, while the frame, adding to the strength, will always form a true edge for the \(\Gamma\)-square.

3rd. It invariably makes a perfect and smooth stretch, and does away with the gluing of the paper to the surface of the board.

4th. It will stretch any quality of drawing paper, and saves much time and annoyance in mounting the same, as well as expense for repairing.
No.
5295 Pinewood Panel and Hardwood Folding Ledges
\[
\begin{aligned}
& \text { Sizes of Panels, inches ....... } 6 \times 9 \quad 7 \times 10 \quad 10 \times 14 \quad 12 \times 17 \quad 13 \frac{1}{2} \times 20 \\
& \text { Each. } \\
& \text { Sizes of Pane } 15 \text {, inches } \ldots . . . .{ }^{2} 18 \times 22 \frac{1}{2} \quad 18 \times 25 \frac{1}{2} \quad 20 \frac{1}{2} \times 28 \frac{1}{3} \quad 25 \times 38 \\
& \text { Each. }
\end{aligned}
\]
F.WEBERCO.


\section*{DRAWING DESKS}


No. 5298
No.
5298 Drawing Desk, with easel combined, \(16 \times 20\) in.

WEBER'S ADJUSTABLE HORSES


No. 5312
Shipping
weight
about N o.
30 tb 5311 Ashwood Trestles, stationary top, 38 in. high,
45 tb 5312 " 32 in . long, with pins at end to prevent board from sliding down 46 in, high,

\section*{Drawing Tables}

In offering the following Drawing Tables for Architects, Draftsmen, Artists, Illustrators and Students, we desire to mention the high-grade material and fine workmanship that enters into their construction. Our own shops are equipped with the latest in machines for woodworking, and each table is given individual attention and carefully examined before being sent out.

\section*{IMPROVED ILLUSTRATORS' DRAWING TABLE}

Improved Illustrators' Drawing


No. 5315 A Table has a firm iron stand and can be adjusted from 38 to 50 inches in height. It has a swinging iron arm, on which rests a drawer, \(6 \times 13 \times 3 \frac{1}{2}\) inches, with shelf.

No.
Each
5315 A Improved Illustrators' Drawing Table, with Bass Wood top, 20×26 inches, with arm and drawer ....

5315 B Do. do., without arm and drawer . .............

5316 A Improved Illustrators' Drawing Table, like No. 5315 A, but Bass Wood top, \(23 \times 31\) inches, with arm and drawer ........

5316 B Do. do., without arm and drawer ..............

\section*{DRAWING TABLES (Continued)}
"HERMES" DRAWING TABLE


No. 5318

The "HERMES" Drawing Table, Pine top tilting both sides. Vertical Adjustment, from 33 to 45 inches. Hardwood Stand, natural finish.

The "HERMES" Table has been adopted as standard equipment by sereral Boards of Education for High School Drawing Rooms.

No.
5318 The "Hermes" Table, as above, \(31 \times 42\) inches .
5318 B " ". " a \(37 \times 60\)

\title{
F.Weber CO. P \(H\) I L A D
ST. LOUIS
}

DRAWING TABLES (Continued)
"UTLLITY" DRAWING TABLE


No. 5325
No.
5325 "UTILITY" Drawing Table.

An excellent Table for general use. The Trestle is of hardwood, well braced and substantially made; can be folded and moved without inconvenience.
Sizes, inches\(23 \times 31\)

\section*{Height, inches}

\section*{Each}

Folded


\section*{"ECLIPSE" DRAWING TABLE}


This table is designed for drawing classes or training schools; is also a very convenient table for various kinds of work. It is made of all hard wood, and can be raised and lowered from 30 to 40 inches. The standards are slotted and the cross-bar has a tenant which runs in the slots. The cross-bar has also a hole running through the centre and has a rod running clear through which holds on the legs, and when the rod is clamped it holds the table very firm and rigid. The top can be tilted from a vertical to a horizontal position, which is accomplished by wrought metal slides, and there is a cross-bar running across with a hole through the centre, and a rod with a thumb nut on the right-hand side, which fastens both sides of the tilting iron at the same time. The table top (drawing board) is of bass.
No.
5326 A "Eclipse" Drawing Table, \(23 \times 31\) inches, without Cabinet ........
We can also furnish a nicely finished cabinet, which contains two drawers, \(6 \times 20\) inches. The upper one 2 inches deep, and the lower one 3 inches deep, inside measurement, which makes a convenient tool case, and when the upper drawer is pulled out it can be used as a tray.

No, 5326 C Cabinets Each,

\section*{"SPHINX" ADJUSTABLE DRAWING TABLE}


This Adjustable Drawing Table is of a very simple and durable construction. The legs of the table are firmly keyed to the ties by means of wedges, and these together form the trestle. One of the ties at the same time acts as a foot rest. A box of the length of the trestle is attached to the latter for holding all necessary drawing tools, and to the right side of trestle is screwed a twoarmed bracket, holding a wooden platform for instruments, pencils, inks, etc.

The whole table stands perfectly firm, and can easily be taken apart by simply removing the wedges from the ties and loosening the screws on the lugs.

The trestles for \(38 \times 54\)-inch and \(48 \times 64\)-inch boards are heavier in construction than those for smaller sizes, and have on both sides a heavy cross-piece under the legs, as reinforcement. (See illustration.)

The Board embodies the finest material and workmanship, being constructed of selected white basswood (the ideal wood for drawing boards), well seasoned, heavy and with end cleats.
"SPHINX" Tables are in use in many of the largest drawing rooms throughout the country. The fact that they are constantly reordered is the best testimonial as to their merit we have to offer. Names of large users on request, to concerns intending to equip their drawing rooms.
No.
5328 "SPHINX" Drawing Table, Basswood Board with Ashwood Trestle.
\[
\begin{aligned}
& \text { Sizes, inches } \\
& \text { Each ......... }
\end{aligned}
\]

Drawer, about \(24 \times 30\) inches, 3 inches deep, with sliding tray and compartments, lock and key

\section*{DRAWING TABLES}


No. 5329 N ATLANTIC DRAWING TABLE-hardwood stand. Size of top 37 in. x 60 in ., made of selected basswood, shellaced.

Height of table 34 inches. One large drawer 26 in. x 37 in. x 2 in., inside dimensions. One small drawer 14 in . \(\times 24 \mathrm{in} . \times 4 \mathrm{in}\), inside dimensions, with partitions and sliding tray.

Set of four raising blocks, 3 inches high, to adjust height of table. A hole in the leg of table fits the dowel of raising block.

Natural finish, shellaced ............. Each,


No. \(5329 \frac{1}{2} \mathrm{~N}\) ATLANTIC DRAWING TABLE-hardwood stand. Size of top 42 in. \(x 84\) in., made of selected basswood, shellaced.

Two small drawers 18 in. \(\times 24\) in. \(\times 5 \frac{1}{2}\) in., inside dimensions. The righthand drawer has partitions and sliding tray to take drafting instruments and accessories. One large drawer 26 in. \(\times 38 \mathrm{in}, \times 2 \mathrm{in}\)., inside dimensions.

Set of four raising blocks, 3 inches high, to adjust height of table. A hole in the leg of table fits the dowel of raising block.

Natural finish, shellaced ............. Each,

\section*{}

\section*{DRAWING TABLES (Continued) \\ "UNIQUE" DRAWING TABLES}

These tables comprise all the latest improvements, are of elegant appearance and a handsome and useful addition to any drafting office. The drawing board is of best pine, well finished and constructed in the best possible manner to allow for contraction and expansion. The stand is black enameled.


No. 5330
No. , plain, without attachments.
5330 "UNIQUE" Drawing Table, plain, without attachments.
Sizes, inches …… \(32 \times 42 \quad 37 \times 48 \quad 37 \times 60 \quad 42 \times 72 \quad 42 \times 84 \quad 42 \times 96 \quad 48 \times 120\) Each.


No.
5331 "UNIQUE" Drawing Table, with Sketch Box, Swing Shelf and Drawer for tools, Foot Rest and adjustment for inclining to either side.
Sizes, inches \(. . . . .332 \times 42 \quad 37 \times 48 \quad 37 \times 60 \quad 42 \times 72 \quad 42 \times 84 \quad 42 \times 96 \quad 48 \times 120\) Each
5332 "UNIQUE" Drawing Table, combining all the advantages of No. 5331, and with Cabinet or Case of three drawers, fastened in the rear of the Stand, and Swing Tray.
Sizes, inches ....... \(32 \times 42 \quad 37 \times 48 \quad 37 \times 60 \quad 42 \times 72 \quad 42 \times 84 \quad 42 \times 96 \quad 48 \times 120\) Each \(\qquad\)
SEPARATE PARTS FOR "UNIQUE" DRAWING TABLE

\section*{F.WEBERCO. \begin{tabular}{lll}
P & \(\mathrm{H} \quad \mathrm{L}\) \\
\hline
\end{tabular} ST. LOUIS BALTIMORE}

\section*{"PHILADELPHIA" ADJUSTABLE DRAWING AND ILLUSTRATORS TABLE}

The top can be fixed at any required height, so that it can be used by a person when sitting or when standing.

By simply unclamping a winged nut, the top can be made to freely rotate in either direction.

A shelf is hinged to the back edge of the table, and so supported from underneath that it is always level, regardless of the inclination of the table itself. This is very convenient for instruments, inkstand, etc.

The tripod, hollow standard and sliding post or spindle are made of iron. The working parts are carefully finished and all other parts are neatly enameled.

The stand complete weighs about 55 pounds, and is sufficiently rigid to support a large drawing board firmly?

The amount of metal and its careful distribution renders this table exceptionally stable and free from vibration.

The lowest position of the top is 30 inches from the floor, and the highest is 44 inches.


No.
Each
\(5334 \frac{1}{2}\) A Philadelphia Table, with polished oak top, \(24 \times 26\) inches
\(5334 \frac{3}{2}\) B Philadelphia Table, with polished oak top, \(24 \times 26\) inches, with instrument shelf at top, but without swinging tray, as shown ........

NOTE-When ordering, state whether casters are desired, or whether the legs should be bored for screwing to the floor.

FWEBERCO \(P\) H I L A D E L P H I A ST. LOUIS BALTIMORE

"PHILADELPHIA" DRAWING TABLE (Continued)


No. \(5334 \frac{1}{2} \mathrm{D}\)
Each
No.
\(5334 \frac{1}{2}\) D Philadelphia Drawing Table, with quartered oak top, \(24 \times 26\) in., with Instrument Shelf and 2 Drawers
NOTE-When ordering, state whether casters are desired, or whether the legs should be bored for screwing to the floor.

ACCESSORIES


\title{
FWWEBERCO. \(\begin{aligned} & \text { ST. LOUIS } \\ & \text { ST. I L }\end{aligned}\) A D E L P H I A BALTIMORE
}

DRAFTSMEN'S STOOLS



\section*{FELT STOOL COVERS AND APRONS}

Felt Stool Covers save the clothes and prevent "shine" on the trousers. An economy, and should be on every stool.

No.
Each
5344 B Extra Heavy Brown Felt Stool Covers ....
5344 A Green Felt Aprons..
5344 D Draftsman's Dust Brush, for Dusting Off Drawing Tables ......

\section*{EYE SHADES}

For Draftsmen, Artists, Clerks
5593 Gray Board Shield, Brass Bound, 5594 Green Celluloid Shield, Rubber Band
5595
5596


 .

\section*{SECTIONAL FILING CABINETS}

\author{
For Preserving Drawings, Plans, Blue Prints
}


No. 5345

These Cabinets are made on the same plan as the well-known sectional book cases. All being made uniform in size and finish and always the same, so that any number of sections procured at different times will fit perfectly.

Construction and Material.-Made of well-seasoned and thoroughly kilndried oak. The drawers are secured together with dovetailed joints. They slide in grooves, there being no rails between them. The back of each drawer is covered for a space of 6 inches with a thin strip to prevent drawings from curling up. Sections are held in place by means of a half-round projection on the back of the section (the cuts do not show this clearly) which fit into the upper section, and the front rails are bolted together. This prevents the rail from sagging and catching on the drawer. Top, Bases and Sections, excepting No. 5345 A are same width over all, so that another stack can be built up without leaving an opening. All joints are well glued, and glue blocks are used at frequent intervals to make the case firm and durable.

Finish and Trimmings.-Golden Oak stain and filler. Three coats of varnish rubbed and finished in a uniform color. Oxidized drawer pulls and label holders.


\section*{SECTIONAL FILING CABINETS (Continued)}


No. 5345 A


No. 5345 B


No. 5345 C


No. 5345 D


No. 5345 E E


No. 5345 F


No. 5345 G


No. 5345 H


No. 5345 J


No. 5345 K


No. 5345 L


No. 5345 M


No. 5345 O

For Sizes and Prices See Next Page

\section*{SECTIONAL FILING CABINETS (Continued)}

\section*{PRICES OF SECTIONS-In Two Sizes \\ LARGE SIZE}
No.
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline  &  & Depth of Drawers
Inches &  & \[
\begin{aligned}
& \text { z } \\
& \text { 台 } \\
& 0 \\
& 0 \\
& 5 \\
& 5 \\
& 3 \\
& 3
\end{aligned}
\] & \[
\begin{aligned}
& \text { Height Over All } \\
& \text { Inches }
\end{aligned}
\] &  \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline 45 A & Five-Drawer Section with Oak Top attached ..... 421 & 32 & 2 & 47 & & 15 & 160 \\
\hline 5345 B & Oak Cap ................. & & & 4512 & 35t & 3 & 75 \\
\hline 5345 C & Five-Drawer Section ..... 42 \(4 \frac{1}{2}\) & 32 & 2 & 45 \(\frac{1}{2}\) & \(34 \frac{1}{2}\) & 142 & 150 \\
\hline 5345 D & Three-Drawer Section ..... 42t & 32 & 38 & 45 & \(34 \frac{1}{2}\) & \(14 \frac{1}{2}\) & 145 \\
\hline 5345 EE & One-Drawer Section ...... 42 \({ }^{\frac{1}{2}}\) & 32 & 7 & 452 & 342 & 93 & 95 \\
\hline 5345 F & Base with Drawer ......... 42t & 32 & 61 & 45 \(\frac{1}{2}\) & 342 & 93 & 95 \\
\hline 5345 G & Plain Base & & & 45 \(\frac{1}{2}\) & \(34 \frac{1}{2}\) & 4 & 35 \\
\hline 5345 H & Low Sanitary Base & & & 45 \(\frac{1}{2}\) & \(34 \frac{1}{2}\) & 5 & 30 \\
\hline 5345 J & High Sanitary Base & & & 45 \(\frac{1}{2}\) & 34 & 22 & 70 \\
\hline 5345 K & Two . Drawers, \(20 \times 32 \times 3 \frac{3}{4}\), & & & & & & \\
\hline & with Tool Tray, and One & & & & & & \\
\hline & Drawer, \(32 \times 42 \frac{1}{2} \times 2\) & & & \(45 \frac{1}{2}\) & \(34 \frac{1}{2}\) & \(9 \frac{1}{6}\) & 100 \\
\hline 5345 L & Three Drawers ............ 42 \({ }^{\frac{1}{2}}\) & 32 & 2 & 45 \(\frac{1}{2}\) & \(34 \frac{1}{2}\) & 91 & 100 \\
\hline 5345 M & Two Drawers, \(20 \times 32 \times 3{ }^{\text {a }}\), & & & & & & \\
\hline & with Tool Tray, and Three & & & & & & \\
\hline & Drawers, \(32 \times 42 \frac{1}{2} \times 2\) & & & 45난 & 342 & 141 & 155 \\
\hline 53450 & Two Drawers, 32x42tx2, and One Drawer, \(32 \times 42 \frac{1}{2} \times 7\). & & & 45 \({ }^{2}\) & \(32 \pm\) & \(4 \frac{1}{8}\) & 140 \\
\hline
\end{tabular}

\section*{SMALL SIZE}


5345 Y One lock to lock all drawers in five-drawer section, net.
5345 Z Hold-down irons, about 14 inches long, to screw to front of drawer inside, two to each long drawer, one to each short drawer, to hold down edge of plans, etc. Each,

\section*{THUMB TACKS}

\section*{STEEL TACKS}


Our Steel Tacks are stamped out of one piece, with a fine point on the pins and enough elasticity to prevent their breaking.

No.
Per Doz. Per 100
5351 Steel Thumb Tacks, 音-inch diameter \(\qquad\)
5352 \(5352 \frac{1}{2}\) 5353 5354 " " " \(\frac{10}{10}\) " " \(\ldots \ldots\)....................
"
\begin{tabular}{ccc}
\(\frac{6}{16}\) & \("\) & \("\) \\
\(\frac{7}{16}\) & \("\) & \("\) \\
\(\frac{4}{16}\) & \("\) & \("\) \\
\(\frac{10}{10}\) & \("\) & \("\)
\end{tabular}
\(\qquad\)


\section*{STEEL THUMB TACKS IN TIN BOXES}

No.
5352 B Steel Thumb Tacks, No, 5352, \({ }^{5} 6\)-inch diameter, 12 pieces in small round tin box ...................... Per Box, Per Doz. Boxes, Note.-See solid head steel thumb tacks Nos. 5390-5393 on next page.

\section*{BRASS TACKS}


Our Brass and German-silver Thumb Tacks are made with the greatest care and of best material. The Pins, which are of hardened steel, are drawn in and riveted, which makes them perfectly secure against their being pushed through or coming out. The edges are thin, to allow the T-square to slide over easily.

\section*{BRASS TACKS}

One Dozen Mounted on Cork, 12 Corks to a Box
Per Doz, Per Gross
No.
5360 Brass Thumb Tacks, \(\frac{5}{16}\)-inch diameter, round head ......
5361
5362
5363
5364
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline & " & & 16 & , & " & , & * & ...... \\
\hline " & * & " & \({ }^{5} 5\) & " & * & * & *f & . . . \\
\hline " & " & & \({ }_{16}\) & " & " & " & " & . . . . . \\
\hline * & " & " & \(\frac{10}{16}\) & " & " & " & " & \\
\hline
\end{tabular}

\section*{THE "SPHINX" INDESTRUCTIBLE STEEL THUMB TACKS}

A Solid Head Steel Tack, with a Fine Pointed Steel Pin, Punched in and Riveted. Packed in Boxes of 100


No.
5390 Tis-in. diameter ...
Per Doz. Per \(1 / 0\) No.
Per Doz. Per 100

\section*{"GOVERNMENT" STANDARD THUMB TACKS}

Fine Quality, German-Silver. Filed Steel Points, Screwed in and Riveted. Round and Beveled Heads


Packed 1 Dozen on Cork, 1 Gross to a Box
\begin{tabular}{|c|c|c|}
\hline No, & In. Diameter Per Doz. F & No. In. Diameter Per Doz. Per Gross \\
\hline 5380 A & \({ }^{3}-\mathrm{in}\), round head, & 5385.A \({ }^{\text {A }}\)-in. bev'd head, \\
\hline 5382 A & \(\frac{1}{2}\) & 5387 A - \({ }^{\text {a }}\) \\
\hline 5384 A & \(8_{8}\) & 5389 A - \\
\hline
\end{tabular}

\section*{HORN CENTRES}


No. 5394


TACK LIFTERS


No. 5398


No. 5399

5398 Weber's Improved Tack Lifter and Paper Cutter Combined (Nickel-plated)
This lifter, owing to its beveled \(V\)-shape claw, catches the tack on the outside points of its edge, and by simply pushing the lifter forward, the tack is lifted without bending the pin.
No. \(5399 \frac{1}{2}\) "Sphinx" Tack Lifter and Pencil File, with Wooden Handle ......

\section*{DESIGNER'S OR RUG TACKS \\ With Extra Long Points}

Steel with Nickel Caps, \(\frac{9}{10}\)-inch points, \({ }_{\text {and }}^{3}\)-inch head ..... Flain Steel \&-inch points, td-inch head.

PUSH PINS


No. 5410


No. 5411


No. 5412


No. 5413

No.
5410 Small, Glass Head Push Pin, per box of 6
5411 Large, Pushless Hangers, Brass, per box of 6
5412 Small, Pushless Hangers, Brass, per box of 6 ..........................
5413 Large, Pushless Hangers, Brass, per box of 3
The Pushless Hangers are ideal for hanging pictures and other wall decorations securcly on plaster, as well as walls of other material.

\section*{Lead Pencils}

\section*{THE "HERMES" DRAWING PENCILS}

WITH COMPRESSED LEADS


Hexagonal, Gold Stamped, Yellow Polished. A superior quality Lead Pencil, with all advantages of the best manufactures, suitable for Mechanical and Freehand Drawing. Hermes Drawing Pencils contain compressed leads of unvarying degrees, set in finest quality cedar. Wear long and well. Ideal pencils for the drawing room, and for school and college use.

No.
\(54406 \mathrm{H}, 4 \mathrm{H}, 3 \mathrm{H}, 2 \mathrm{H}, \mathrm{H}, \mathrm{F}, \mathrm{HB}, \mathrm{B}, 2 \mathrm{~B}, 3 \mathrm{~B}, 6 \mathrm{~B} \ldots .\).
5441 With Rubber Tip, HB grade only ...............

\section*{LEAD PENCILS (Continued)}

\section*{HARDTMUTH'S KOH-I-NOOR DRAWING PENCILS}


\section*{}

No, 5450

No.
5450 "KOH-I-NOOR" Hexagon, Yellow, Polished Cedar, \(9 \mathrm{H}, 8 \mathrm{H}, 7 \mathrm{H}, 6 \mathrm{H}, 5 \mathrm{H}, 4 \mathrm{H}, 3 \mathrm{H}, 2 \mathrm{H}, \mathrm{H}, \mathrm{F}\), HB, B, 2B, 3B, 4B, 5B, 6B HB with Rubber Tip

\section*{KOH-I-NOOR ARTISTS' PENCILS}


No. 5451
No.
Each Per Doz.
5451 "KOH-I-NOOR" Artists' Pencil, \(6 \frac{1}{2}\) inches long, with Movable Leads, \(9 \mathrm{H}, 8 \mathrm{H}, 7 \mathrm{H}, 6 \mathrm{H}, 5 \mathrm{H}, 4 \mathrm{H}, 3 \mathrm{H}, 2 \mathrm{H}, \mathrm{H}\), F, HB, B, 2B, 3B, 4B, 6B
5451 A "KOH-I-NOOR" Artists' Pencil, with Double End, HB and 6 H

\section*{KOH-I-NOOR ARTISTS' LEADS}

\footnotetext{
No. \(\quad \stackrel{\text { Per }}{\text { Lead }}\) Per Box \(\begin{gathered}\text { Per Doz. } \\ \text { Boxes }\end{gathered}\)
5452 "KOH-I-NOOR" Artists' Leads, \(5 \neq\) inches long, in wooden boxes of 6 Leads each. \(9 \mathrm{H}, 8 \mathrm{H}, 7 \mathrm{H}, 6 \mathrm{H}\), \(5 \mathrm{H}, 4 \mathrm{H}, 3 \mathrm{H}, 2 \mathrm{H}, \mathrm{H}, \mathrm{F}, \mathrm{HB}, \mathrm{B}, 2 \mathrm{~B}, 3 \mathrm{~B}, 4 \mathrm{~B}, 6 \mathrm{~B} .\).
}

LEAD PENCILS (Continued)

\section*{LEAD PENCILS AND PENCIL HOLDERS}

\section*{}

\section*{"THE FINYSTAKD DIST DEAWNG PENCIL * HB}

No. 5470

\section*{"CASTELL" DRAWING PENCILS}

5470 "CASTELL" Pencils, Hexagon, Green Polished, Gilt Lettering in 16 degrees. \(8 \mathrm{H}, 7 \mathrm{H}, 6 \mathrm{H}, 5 \mathrm{H}, 4 \mathrm{H}\), \(3 \mathrm{H}, 2 \mathrm{H}, \mathrm{H}, \mathrm{F}, \mathrm{HB}, \mathrm{B}, 2 \mathrm{~B}, 3 \mathrm{~B}, 4 \mathrm{~B}, 5 \mathrm{~B}, 6 \mathrm{~B}\). Packed in boxes of 1 dozen HB with Rubber Tips

5471 "ELDORADO" Drawing Pencils, Yellow Polished, Hexagon, in 16 degrees of hardness. \(8 \mathrm{H}, 7 \mathrm{H}, 6 \mathrm{H}\), \(5 \mathrm{H}, 4 \mathrm{H}, 3 \mathrm{H}, 2 \mathrm{H}, \mathrm{H}, \mathrm{HB}, \mathrm{F}, \mathrm{B}, 2 \mathrm{~B}, 3 \mathrm{~B}, 4 \mathrm{~B}, 5 \mathrm{~B}, 6 \mathrm{~B}\),
5473 "VENUS" Drawing Pencils, Green Polished, Hexagon, in 16 degrees of hardness. \(8 \mathrm{H}, 7 \mathrm{H}, 6 \mathrm{H}\), \(5 \mathrm{H}, 4 \mathrm{H}, 3 \mathrm{H}, 2 \mathrm{H}, \mathrm{H}, \mathrm{HB}, \mathrm{F}, \mathrm{B}, 2 \mathrm{~B}, 3 \mathrm{~B}, 4 \mathrm{~B}, 5 \mathrm{~B}, 6 \mathrm{~B}\),
"SPHINX" PENCIL HOLDER


No. 5516

No.
Each Per Doz
5516 "SPHINX" Pencil Holder, Polished Cedar and Metal Fer-
rule, with machine thread
\(5516 \frac{1}{2}\) Aluminum Pencil Holder; will take pencil at either end.

\section*{LEAD PENCILS (Continued)}

\section*{COPYING LEAD PENCILS}

No.
Hardtmuth's "Kohinoor" Copying Pencil, Yellow Polished, Round
5481 Hardtmuth's "Mephisto" No. 77, Copying Pencil, with Red Tip or Mouthpiece ....
5482 Hardtmuth's "Mephisto" No. 73 B, Copying Pencil \(\qquad\)
5483 Hardtmuth's "Mephisto" No. 73 B, Hard, Copying Pencil
5486/165 "Venus" Copying Pencils \(\qquad\)
5486/168 .. .. .. hard ......

\section*{COLORED CRAYON PENCILS}

No. Each Per Doz.
5505 F. Weber Co.-Sussner Colored Crayon Pencils, in wood, Superfine Quality, made in different colors,

\section*{SCALE OF THE COLORS}
\begin{tabular}{|c|c|c|c|c|}
\hline 00 & Scarlet & 21 Sepia & 41 & Light Carnation \\
\hline & White & 22 Olive Green, deep & 42 & Ochre \\
\hline \[
2
\] & 2 Light Chrome Yell. & . 24 Dark Violet & 43 & Rose \\
\hline 3 & 3 " Blue & 25 Burnt Sienna & 44 & Dark Carnation \\
\hline 4 & 4 Orange & 26 Dark Blue & 46 & Burnt Umber \\
\hline 5 & 5 Vandyke Brown & 27 Yellow Green & 49 & Finest Carmine \\
\hline 7 & 7 Yellow Ochre & 28 Olive Brown & 53 & Deep Ros \\
\hline 8 & 8 Carmine Rose & 31 Raw Umber & 54 & Madder Lake \\
\hline 11 & 1 Light Green & 32 Red Ochre & 56 & Green, medium \\
\hline 12 & 2 Vermilion & 33 Deep Chrome Yell. & 57 & deep \\
\hline 13 & 3 Dark Green & 34 Blue Green & & Mauve \\
\hline 14 & 4 Red Brown & 35 Blue Violet & 61 & Prussian Blue \\
\hline 15 & Olive Green, light & , 36 Dark Grey & 62 & Neutral Tint \\
\hline 16 & 6 Red Violet & 37 Light Grey & 63 & Chrome Yell., \\
\hline 17 & 7 Indian Red & 38 Mineral Blue & 68 & Cobalt Blue \\
\hline 18 & 8 Ultramarine & 39 Olive Green, med. & 69 & Imperial Blue \\
\hline & 0 Black & 40 Light Red & & esal Blue \\
\hline
\end{tabular}

Sample Color Card of Sussner Crayon Pencils sent on application.

\section*{COLORED PENCILS FOR OFFICE USE}

No.
5506 "Ajax" Colored Office Wax Crayon Pencils, in wood, with extra thick lead, 7 inches long. The popular office checking pencils.

Each Per Doz. Per Gross
Red, Blue, Green and Black \(\qquad\)

\section*{PENCILS (Continued)}

\section*{GLASS AND LEATHER MARKING PENCILS AND CRAYONS}

\section*{"SPHINX" PAPER PENCILS FOR MARKING ON CHINA AND GLASS}

No.
5509 Black
Blue, Red, Violet and Yellow
Each Per Doz.
"SPHINX" CRAYONS FOR GLASS AND LEATHER
 No.
5510 Red, White, Blue, Green, Yellow, Black
Each Per Doz. Per Gross
\(5510 \frac{1}{2}\).Holder, Brass, Nickel-plated, for "Sphinx" Glass and
Each Per Doz,
Leather Crayons

SOAPSTONE PENCLLS
No.
Each Per Doz. Per Gross
5511 F. W. Co.'s. In white wood, about 7 inches long..

\section*{BLAISDELL'S WAX CRAYON PENCILS, IN PAPER}

5508 Blaisdell's Paper Pencils, Blue, Black, Green, Yel-
low, Brown, White, Violet, Red and Pink ........
Sepia
Each Per Doz. Per Gross
\(\qquad\)
\(\qquad\)

ENGINEERS' AND SURVEYORS' MARKING AND LUMBER CRAYONS

No. 5512
No.
5512 The "Sphinx," Hexagon, Red, Blue, Black, Kiel and Yellow, best quality, size \(\frac{1}{2} \times 4 \frac{3}{3}\) inches

\section*{PENCLL POINTĖRS AND ERASING SHIELDS PENCIL POINTERS}


No. 5518
Each Per Doz
No.
5517 Sand-paper Block, \(13 \times 4\) inches
5518 . 18 with hand .....................................
\(5518 \frac{1}{2}\) Emery Paper, with handle, size \(18 \times 6\) inches
AUTOMATIC PENCIL POINTERS


No.
5520 "Boston" Pencil Sharpener
ERASING SHIELDS


No.
Each Per Doz.
5524 N Improved Draftsmen's Erasing Shield, \(2 \frac{1}{2} \times 4\) in., GermanSilver
5524 S N Improved Draftsmen's Erasing Shield, \(2 \frac{1}{2} \times 4\) in., Blued Steel
Note-The German-silver Shields wear much better than those we formerly made of brass and nickel-plated.

The Blued Steel are especially to be recommended for their combined durability and thinness, the latter quality permitting of very accurate, or close, erasures.
F.WEBERCO P H I L ST. LOUIS
D. \(E \quad L \quad H \quad \mid \quad A\) BALTIMORE


\section*{F. WEBER CO.'S}

\section*{"PREMIER" RUBBER ERASERS}


No. 5525 B


No. 5525 C
"PREMIER" RED ERASERS
This Eraser is made of a very superior quality of Red Rubber, which will not smear or affect the surface of the paper on which it is used; it works equally well on Tracing Cloth, Tracing Paper, etc.; and as a paper cleaner there is none better on the market.

Single Beveled
5525 A School size, 72 pieces to the pound \(\qquad\)
5525 B Medium size, 40 pieces to the pound
5525 C Large size, 20 pieces to the pound
5525 D Extra large, 12 pieces to the pound
Double Beveled


No. 5525 E
Each Per Doz.
No.
5525 I
5525 E
Premier Double Bevel, Red Rubber, School size " 144 ".
5525 F
5525 G
5525 H
". " large
Green Rubber, smali
large

> "PREMIER" PLIABLE (KNEADED) RUBBER

5526 Small
Per piece,
Per dozen pieces,
5527 Large
".
ntities

RUBBER ERASERS (Continued)
"PREMIER', GREY CLEANING ERASER


No. 5533
A pliable velvet rubber, a most satisfactory cleaner and pencil eraser, for paper and tracing cloth, which positively will not affect the most delicate surface. It will not smear.

5533 Pieces to the pound \(\ldots \ldots\). \(\quad 8 \quad 12 \quad 20 \quad 40 \quad 60 \quad 80\)
Per piece pound \(\qquad\)
INK AND TYPEWRITER ERASERS


No. 5550
"SPHINX" INK ERASER

Each Per 100
No.
5550
"SPHINX" Ink Eraser, \(1 \times \frac{3}{16} \times 1^{\frac{1}{2}}\) inches ..........
"PREMIER" INK AND PENCIL ERASER COMBINED
No. 5551 A Ink and Pencil Eraser, flat, double wedge, small. Each, Per Doz.,

No. 5551 C Ink and Pencil Eraser, small school size "144," flat, double wedge

Per Doz..


No. 5551
"'PREMIER', TYPEWRITER ERASER
A. Fine Sanded Eraser, Excellent for Removing Typewriting or Ink

No. 5552 Typewriters'
F.W. \& CO'S

Typewriter Eraser

No. 5552 Eraser, flat, double wedge. small.
Each, Per Doz.,
No. 5553 Typewriters' Eraser, flat, double wedge, large.
Each,
Per Doz.,

RUBBER ERASERS (Continued)
"PREMIER', CIRCULAR ERASER


No. 5557
Ink and Typewriter Eraser
No.
5557
"Premier" Circular Ink Eraser, packed 1 dozen in box ....
Each Per Doz.

\section*{"ART GUM" \\ Dry Cleaner}

No.

Size \(1 \times 1 \times 1\) inches, 1 dozen in a box ........

" \(2 \times 1 \times 1\) " 1 " 1 " ". \(2 \frac{1}{4} \times 1 \frac{1}{8} \times 1 \frac{1}{8}\)
". \(3 \times 2 \times 1\)
-. \(3 \times 3 \times 2\)
. \(2 \times 1 \times 1\)
- \(2 \frac{1}{4} \times 1 \frac{1}{6} \times 1 \frac{1}{5}\)
" \(3 \times 2 \times 1\)
\(3 \times 3 \times 2\)

\section*{HARDTMUTH VELVET RUBBER}


No. 5559
No.


No. 5561/6500

5559 HARDTMUTH'S VELVET OR SOFT RUBBER. A Paper Cleaner and and Pencil Eraser, Pink and Gray. The gray is a triflle softer than the pink.
\(\begin{array}{llllllll}\text { Pieces to the pound } \ldots . . & 60 & 40 & 30 & 20 & 12 & 8 & 4\end{array}\) Per piece
\(5561 / 6500\) " "Vandyke....................
5561/6500 "Vandyke" Ink Eraser, rose colored Each,


\section*{RUBBER ERASERS (Continued) NIGRIVORINE}


No. 5560
Nigrivorine Eraser and Blender, small size, No. 3, in boxes of 1 dozen Nigrivorine Eraser and Blender, medium size, No. 2, in boxes of 1 dozen Nigrivorine Eraser and Blender, large size No. 1 , in boxes of 1 dozen

\section*{RUBBER PENCIL TIPS}


No. 5561
5561 Rubber Pencil Tip, Hexagon

SPONGE RUBBER
For Cleaning Paper


No. 5565
5565 Sponge Rubber.
Sizes inches .................. 1x1x1 \(1 \times 2 \times 1 \quad 2 \times 3 \times 1 \quad 3 \times 4 \times 1\) Each
5566 Sponge Rubber with Solid-Rubber Back, size \(1 \frac{3}{3} \times 2 \frac{1}{2} \times \frac{5}{8}\) inches. . Each,


No. 5570
5570 Steel ERASING KNIFE, Blade \(2 \frac{1}{3}\) inches long, Wood Handle


\section*{ARKANSAS OIL STONES}


No. 5586
No.
5586 Arkansas Oil Stones, Hard, Mounted in Polished Mahogany Case, with Cover.
 Each
Arkansas Oil Stomes, Hard, Unmounted, 3 to \(4 \frac{1}{2}\) inches long by 1 to 14 inches wide, 名 to \(\frac{5}{5}\) inch thick ...............................Each,

KNIFE-BLADE SHAPE


\section*{No. 5590}

No.
5590 Arkansas Oil Stones, Knife-Blade Shape, Sharp Edge, 3 to \(4 \frac{1}{2}\) inches long by \(\frac{3}{4}\) to 1 inch wide by \(\frac{1}{8}\) to \(\frac{1}{4}\) inch thick ........ Each,

\section*{PAPER CUTTER}


No. 5598
No.
5598 Sphinx Paper Cutter, Brass \(\qquad\)


\section*{STEEL PENS}

For Drawing and Lettering


PENHOLDERS

F WEBER \& Co.
No. 5625


No. \(5625 \frac{1}{2}\)


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\section*{STEEL PENS (Continued)}

AUTOMATIC SHADING AND MARKING PENS


No. 5630 (Showing Shading Pen)
The Shading Pens make two shades, at a single stroke, of one color; the Marking Pens mark only in solid color.
\({ }_{5630}\) Automatic Shading and Marking Pens, Each Per Doz. 5 and 6 . 6
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Widths of Automatic Shading and Marking Pens


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No. No. \(5634 \frac{1}{2}\)
5634 Leonardt's Ball-Pointed Pens, No. 516 F ....Each Per Doz. Per Gross \(5634 \frac{1}{2}\) " " No. 506 F


5635 Pens, Single-Pointed.
Nos. 1, 1立, 2, 2t \(2,3,3 \frac{1}{2}, 4,4 \frac{1}{2}, 5,5 \frac{1}{2}, 6\)
Per Gross Per \(1 / 4\) Gross Per Doz.
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\(5636 \frac{1}{2}\) Pens, Three-Pointed for ornamental work
5637 Assortment of Single- and Double-Pointed Pens, 25 in a box, per
5640 Ink Holders, for Round-Writing Pens

STEEL PENS (Continued)
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The Speedball is the fastest and most easily operated broad-stroke pen on the market. It produces a stroke of uniform width throughout when drawn in any direction. Up-strokes, Down-strokes or Laterals. The ink flow is under automatic control by double reservoir fountain and tip-retainer over the extreme point of bent-up section, wheh forms the marking, point. This is an exclusive patent feature of the Speedball and prevents any excess flood of ink or color on the strokes, which is most liable to occur in broad-stroke pens of a like character, minus this most important auxiliary. It is unnecessary to use a dropper, quill or stick to fill the reservoir. Simply dip in the ink like an ordinary pen. They will work in any India Ink or opaque water color properly diluted to flowing consistency. The small sizes retain enough ink to make an entire alphabet.

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6080 Mounted in Hard Rubber, 1 Lens. Diameter, inches .......................... \(\frac{4}{1} 1 \frac{1}{4}\) \(1 \frac{1}{2}\) Each
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\section*{POCKET MAGNIFYING GLASSES}


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No. 6084

6082 A Coddington Lens, high power, Double Achromatic Lens, metal
folding frame, nickel-plated, \(\frac{5}{8}\)-inch diameter, large field ............ 6082 B Coddington Lens, like No, 6082 A, \% 6082 C Codington Lens, very powerful, 6082 A , \(\frac{13}{18}\) ""
\(6082 \frac{1}{2}\) A Coddington Lens, very powerful, 18 diameters, in metal folding \(6082 \frac{1}{2}\) B Coddington Lens, like \(6082 \frac{1}{\frac{1}{2}}\) A
6082 R Coddington Lens, in rubber, with handle diameter, 15 diameters,
6083 R Thadington Lens, in rubber, with handle
6083 Thread Counter, folding brass frame, 1-inch field
\(6083 \frac{1}{2}\) ". ". ". ". ". nickel-plated, \(\frac{1}{\frac{1}{2}-\text { inch }}\) " field
6084 Magnifier, three legs, with screw adjustment, 1 -inch diameter


Best Grade, Round
Na
No. 6086
6086 Magnifying or Reading Glasses, Ebony Handle, German-silver Mounted. Diameter, inches ........ 2 2 \(\quad 3\) 3 \(\quad 4\) 4
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This is the ideal reading glass. Does not distort and image is easily seen and type read from rim to rim.
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No. 6360


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No.
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Each \(\qquad\) ..... \(1 \frac{1}{2}\) in.
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For Measuring the Distance Traversed in Walking Operated by the Motion of the Body


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No. 6371

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6380 Passometer, or step counter, registers to 25,000 steps, with stem attachment for setting the hands to zero
6381 Passometer, or step counter, registers to 100,000 steps, with stem
 Pedometers, Nos. 6370 to 6381 , measure about \(1 \frac{1}{4}\) inches diameter
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Pencil part for Compasses
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4133 Lengthening Bars for Compasses
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Pencil part for \(5 \frac{1}{2}\)-inch Compasses
Needle Point part for \(5 \frac{1}{2}\)-inch Compasses
Lengthening Bars for \(3 \frac{1}{2}\)-inch Compasses
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Nos. 3412 and 3413
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Pen part for Beam Compasses
Pencil part for Beam Compasses
Needle Point part for Beam Compasses
Slide part, with Steel Points, for Tubular Beam Compasses
Tubular Bars, for Beam Compasses, Nos. 3500 and 3502
No. 3504
Steel Point, to screw in Dividers, \(5 \frac{1}{2}\) inches and \(3 \frac{1}{2}\) inches
Shouldered Needles
Screws and Nuts, small
large
Bolts for Bow Instruments

\section*{PARTS FOR "SPHINX" INSTRUMENTS}

Pen part for Compasses
Pencil part for Compasses
Lengthening Bars for Compasses
Screws and Nuts
Shouldered Needles
Bolts for Bow Instruments

\section*{PARTS FOR "COSMOS" INSTRUMENTS}
Leads for Compasses, per box of 5 leads loose, in boxes of 1 gross

Eclipse School Compass, to take lead pencil. Very practical for Each school use
(Add to Page 240.)


\section*{SEXTON'S OMNIMETRE OR IMPROVED CIRCULAR SLIDE RULE}

Functions: Logarithms, Numbers, Squares, Square Roots, Cubes, Cube Roots, Sines, Tangents, Versed Sines, Secants.

\section*{No.}

\section*{4295-1 Sexton's Omnimetre}

Diameter \(7 \frac{1}{1}\) inches, Bristol Board Discs, Readings from edge of runner. Each,

No.
4295-3 Sexton's Omnimetre. Diameter 7 inches. Non-absorbent Bristol Board Discs. Readings from hair-lined runner. Lower disc perforated to facilitate manipulation. Milled nut to clamp dises in position when required. Character of graduations gives increased ease of reading. Additional functions, fifth powers and fifth roots..
(Add to Page 264.)

\section*{"SPHINX" HANDY POCKET TAPES}

Divided inches to 16 ths on one side, other side millimeters


No.
6600 Steel Tape, \(\frac{1}{6}\) inch wide, Nickel-plated Case, with Spring and Stop, divided one side, inches to 16 ths, other side, millimeters. Length in feet Each

6601 Steel Tape, same as 6600 , but inches to 16 ths on one side; feet to 10 ths and 100 ths on other side. Length in feet Each.
6606 Linen Tape, is inch wide, Nickel-plated Case, with Spring and Stop, divided \(\frac{1}{8}\) inches and millimeters.

Each


\section*{(Add After Page 30.)}

\section*{DRY COLORS}

\section*{Finely Prepared, Free From Grit and Impurities-For Artists, Decorators, Scene Painters, Etc.}

\section*{WHITES}


\section*{PURPLES}

49 Purple Lake, Violet . .
50 ." Madder .......
51 Violet Crap Lake ....

\section*{BLUES}

60 Indigo ..................
61 Prussian Blue
62 Ultramarine Blue, Fine

\section*{GREENS}

76 Emeraude Green .....
77 Oxide of Chromium ..
78 Prussian Green ......
79 Sap Green
80 Transparent Green ...
81 Terre Verte
82 Veronese Green ........
83 Verdigris ..............

\section*{BROWNS}

95 Burnt Sienna
96 " Umber
97 Raw Sienna
98 " Umber ........
99 Sepia
100 Vandyke Brown ....

\section*{YELLOWS}

119 Indian Yellow
120 Lemon Yellow
121 Mars Orange .......
122 " Yellow .......
123 Naples Yellow, Lt...
124 ". " Med.
125 " ". Deep.
126 Yellow Lake........
127 " Madder
128 ". Ochre
129 ." Crap Lake ..
130 Zinc Yellow .........
116 Flesh Ochre ........
117 Gamboge ............
118 Golden Ochre, Trans.
For Glass Slabs and Glass Mullers, see page 99.

\title{
WEBER ARTISTS' WATER COLORS IN JAPANNED TIN BOXES
}

\section*{Half Pan Assortments}

No.
\begin{tabular}{|c|c|}
\hline 101a- & With 6 Divisions-Fitted-Containing 6 Half Pans, 3 Red Sable Brushes, and 1 Wash Brush \\
\hline 101a-12 & With 12 Divisions-Fitted-Containing 12 Half Pans, 4 Red Sable Brushes and 1 Wash Brush \\
\hline 101a-16 & With 16 Divisions-Fitted-Containing 16 Half Pans, 4 Red Sable Brushes and 1 Wash Brush \\
\hline 101a-20 & With 20 Divisions-Fitted-Containing 20 Half Pans, 4 Red Sable Brushes and 1 Wash Brush \\
\hline 101a-24 & With 24 Divisions-Fitted-Containing 24 Half Pans, 4 Red Sable Brushes and 1 Wash Brush \\
\hline
\end{tabular}

\section*{Whole Pan Assortments}

No.
103a- 6 With 6 Divisions-Fitted-Containing 6 Whole Pans, 4 Red Sable Brushes and 1 Wash Brush

Each
103a- 8 With 8 Divisions-Fitted-Containing 8 Whole Pans, 4 Red Sable Brushes and 1 Wash Brush

Each

\section*{Tube Assortments-Tubes \(\frac{1}{2} \times 2 \frac{1}{4}\) inches}

No.
105a- 8 With 8 Divisions-Fitted-Containing 8 Tubes, 3 Red Sable Brushes and 1 Wash Brush

Each
105a-10 With 10 Divisions-Fitted-Containing 10 Tubes, 3 Red Sable Brushes and 2 Wash Brushes
105a-12 With 12 Divisions-Fitted-Containing 12 Tubes, 3 Red Sable Brushes and 2 Wash Brushes
105a-15 With 15 Divisions-Fitted-Containing 15 Tubes, 3 Red Sable Brushes and 2 Wash Brushes
105a-20 With 20 Divisions-Fitted-Containing 20 Tubes, 4 Red Sable
105a-24 \(\begin{gathered}\text { With } 24 \text { Divisions-Fitted-Containing } 24 \text { Tubes, } 4 \text { Red Sable } \\ \text { Brushes and } 2 \text { Wash Brushes }\end{gathered}\)

\section*{F.WEBERCO P H I L A D E L P H I A ST. LOUIS BALTIMORE \\ }
(Add After Page 105.)

\section*{AIR BRUSHES}

Thayer \& Chandler Model A \(\qquad\)
Wold Model A-1
" " A-1-N
" " Master
" " X-7
Foot Pump
Tank
Gauge
Tubing, per foot
Automatic Electric Pump
(Add to Page 169.)

\section*{BLOTTING PAPER}

No. \(\qquad\)
3032 \(\frac{1}{2}\)-W White, \(19 \times 24\) inches
3032 \(\frac{1}{2}\)-C Colored, \(19 \times 24\) inches

(Add After Page 161,)
WOOD CARVING SETS
BEST AMERICAN TOOLS


Set No. 5 Containing 6 tools of the most appropriate shapes, with handle,
Per set complete length \(8 \frac{1}{2}\) inches, in wooden box
Set No. 6 Containing 6 tools of the most appropriate shapes, with handle, complete length \(5 \frac{1}{2}\) inches, in wooden box
(Add to Page 161.)

\section*{WEBER LIQUID TAPESTRY COLORS}

\author{
In 2-ounce Glass Bottles
}

Made waterproof to prevent their spreading and no Medium is needed to mix with the same.

\begin{tabular}{|c|c|c|}
\hline No. & No. & No. \\
\hline 1. Chrome Yellow & 14 Violet Blue & 22 Emeraude Green \\
\hline " Deep & 15 " Purple & 23 Hooker's Green, No. 2, \\
\hline 5 Raw Sienna & 16 Turquoise Blue & Deep \\
\hline 6 Burnt Sienna & 17 Cobalt Blue & 24 Olive Green \\
\hline 7 Raw Umber & 18 Ultramarine & 26 Crimson Lake \\
\hline 9 Light Red & 19 Prussian Blue & 27 Sepia \\
\hline 10 Vandyke Brown & 20 Indigo \({ }^{\text {a }}\) & 29 Ivory Black \\
\hline 12 Vermilion & 21 Hooker's Green, No. 1, & 30 Carmine \\
\hline 13 Rose Madder & Light & \\
\hline
\end{tabular}

\section*{TAPESTRY OUTFIT}

Containing 6 Bottles well-selected Colors and Brushes, in wooden box..
The Same, with 12 Bottles
Brushes for Tapestry Painting and Stenciling, No. 142, Bristle Poonah; No. 199, Slanting Bristle; No. 193, Bright's Bristle. see pages 75 and 81.

\section*{TAPESTRY CANVAS}

Selected for Tapestry Painting, Wall Decoration, Upholstering, Curtains


Note.-Artists' Oil Colors, in tubes, are frequently and very successfully used for Tapestry Painting. Very beautiful and permanent effects are obtained by their use. For separate colors and outfits see pages 5 to 53 .

\section*{SUNDRIES}

\section*{THE RELIEF PENCIL}

For Making Raised Letters and All Kinds of Ornaments in Relief


> Outfit complete, containing Relief Pencil, Dry Powder, Liquid and 1 vial each of Gold and Silver Bronze Powder Medium No. 1 or Liquid No. 2 " Powder Per bottle, each, Relief Pencil Bulb

FRESCO BULB

COPPER FOIL Size Persheet Per 100
Silver or White .................................... \(4 \frac{12 \times 10}{} \times 10^{2}\)
Crimson, Scarlet, Blue, Green, Gold, and other Colors, \(4 \frac{1}{2} \times 10\)
TIN FOIL
Per Lb,
Thick
Medium
Thin
PEARL IN SHEETS
PerOz.
Aurora, selected pieces small pieces
Crushed Pearl
FROSTING (DIAMOND DUST)
White Frosting
in boxes
Per pound, box,

\section*{(Add to Page 142.) \\ SCHOOL CHALK}

White, in gross boxes
Colored, in gross boxes, assorted colors

\section*{THE "SPHINX" PASSE-PARTOUT GUMMED BINDING PAPER}

For Binding Pictures, Paper Frames and numerous articles that can be protected under glass. Made in the following colors: Black, White, Red, Fawn, Green, Brown, Olive, Buff, Grey, Tan.

One inch wide; per roll of 30 feet
GUMMED MUSLIN TAPE, in following colors; White, Black, Red,
Grey, Green, Brown and Blue. In rolls of 10 yards, z-inch wide,
per roll

\section*{}
Oil-Painting Materials ..... 5-81
Water-Color Painting Materials ..... 82-123
Brushes for Oil-Color Painting ..... 65-81
" " Water-Color Painting ..... 106-123
" " Show-Card and Sign Painting ..... 114-121
" " Gilders ..... 122-123
" China Painting ..... 131-137
China-Painting Materials ..... 124-137
Crayon and Pastel Painting Materials ..... 138-149
Modeling Tools and Materials ..... 150-155
Drawing Papers, Etc. ..... 164-179
Drawing Books, Blocks, Tracing Cloth and Papers ..... 164-179
Cross-Section Papers, Blocks and Books ..... 180-189
Profile and Cross-Section Papers ..... 180-189
Blue-Print Papers, Frames, Etc. ..... 190-195
Drawing Instruments ..... 196-224
Protractors, Slide Rules, Pantographs and Planimeters ..... 225-249
Scales, Rules and Rulers ..... 250-265
Drawing Boards and Tables, T-squares and Angles ..... 266-302
Thumb Tacks, Pencils, Pens, Erasers, Etc. ..... 303-319
Magnifying Glasses, Compasses and Pedometers ..... 319-322
Alphabets and Monograms, Art Publications ..... 324-332
Scientific Publications ..... 333-334
Etchers' and Engravers' Tools and Materials ..... 156-163
Lithographers' Materials ..... 156-163
Gilders' Materials ..... 156-163
Stenciling Materials ..... 161
Studies for Water-Color, Oil-Color, China and Pastel Painting ..... 332
Pyrography or Woodburning Materials. See Special Catalogue.
Wax-Flower and Paper-Flower Materials. See Special Catalogue.Architectural Works. See Special Catalogue of Art Works.Designs for Carvers, Lithographers, Engravers, Fresco Painters andDesigners of all branches. See Special Catalogue of Works on Art.
Engineering Instruments. See Special Engineering Catalogue.

\title{

}


\section*{Intux}

Page
Balancing Palettes ..... 59
Balsam Copaiva ..... 127
Banding Wheels for China ..... 130
Barometers. See Special Cata- logue.
Bars for Beam Compasses ..... 271
Beginners' Oil-Color Box ..... 47
Binding Paper ..... 341
Bird and Insect Studies, Colored. ..... 332
Blackboard Set ..... 272
" Compasses ..... 272
. Protractor ..... 272
Black Line Cloth ..... 193
Black Print Paper ..... 193
Blaisdell Paper Pencil ..... 310
Blanc d'Argent, All Makes ..... 87
Blankets, Etchers', for Printing. ..... 156
Blanks for Building Trade ..... 189
Blenders or Stumps ..... 147-149
Blocks for Drawing ..... 171-173
" Cross-Section ..... 188-189
* Geometrical ..... 287
. Oil-Sketching ..... 43
Blood-Stone Burnishers ..... 162-163
Blotting Paper ..... 839
Blowers for Fixatif ..... 146
Blue-Prints ..... 193
Blue-Print Bath Trays ..... 195
Cloth ..... 191
.. Erasing Fluid ..... 192
4. Frames ..... 194-195
* Ink ..... 192
* Machines, Electric ..... 195
.. Paper ..... 190-191
*. Restorer ..... 192
* Varnish ..... 192
Wringers. Prices on
Application.
Boards, Academy ..... 43
.. Bristol and P. O ..... 167
.. Canvas ..... 43, 44
* Drawing ..... 288, 289
.. Illustrators ..... 168
". Mounting ..... 168
" Pastel ..... 147
" Poster Show Card ..... 168
- Ross ..... 170
" Russell's Canvas ..... 43
* Show Card ..... 168
". Strathmore ..... 167
Bobs, Plumb. See Special Cata-logue.

\title{
FWEBEDCO phitadelphia ST. LOUIS
}

\section*{INDEX (Continued)}

Page
Cabinet Nest Saucers ..... 96
Cabinets, Filing ..... 00-302
Cake Water Colors ..... 88-89
Calculating Scales or Slide Rules.235-242
Calipers, Micrometer ..... 264
Camel-Hair Brushes for China
Painting . ......................... . . 131-137
Camel-Hair Lacquering Brushes. . 122-123Brushes for Water-
Color ..... 108-123
Camel-Hair Varnish Brushes .... 79-80
Writers and Stripers. ..... 118
Cans, Tin, for Oil ..... 57
Canvas, Artists', Prepared ..... 38-39
Canvas, Artists', on Stretchers. ..... 40
Canvas, Decorators ..... 39
" Artists for Pastel Paint-
ing ..... 147
Canvas, Artists', for Tapestry Painting ..... 161,340
Canvas Boards, Weber's ..... 43
Russell's ..... 44
Carriers ..... 63
. Sketching Blocks ..... 43
" Pins ..... 40
- Steel Scraper ..... 55, 56
Stretching Pincers ..... 42
Carmine, Liquid ..... 100
Carvers' Designs. See Special Cat Carving Tools, Wood ..... 339
Carpet Crayons. Quoted on Re-quest.
Cases, Oil-Color, to Retail from. . 30, 84" Pastel, to Retail from .... 30, 84Water-Col., to Retail from. 30, 84
Celluloid in Sheets ..... 163
Centering Wheels ..... 130
Certificate Books, Architects' ..... 189
Chains, Measuring. See Special Catalogue.
Chalk ..... 142
." Leeturers ..... 142
Chamois Boards ..... 167
Skins ..... 149
Charcoal Sticks ..... 143
and Crayon Sharpener. . ..... 143
for Etchers ..... 157
" Eagel ..... 149
Paper ..... 166
Children's Painting Books ..... 382
China Buttons. Quoted on Re-quest.
China Colors, Lacroix's ..... 124
" " Fry's ..... 125
Cups ..... 99

\section*{INDEX (Continued)}


\section*{INDEX (Continued)}


\section*{INDEX (Continued)}


\section*{INDEX (Continued)}

Page
Levels and Transits. See Engr. Catalogue.
Levels, Abney, See Engr. Cat. " Hand, Locke. See Engr. Catalogue.
Levels, Rod. See Engr. Catalogue.
Line, Plumb Bob. See Engr. Cat.
Linead, Perspective
Linen Tapes. See Engr. Cat.
Linseed Oil ........................ 36
Liquid, Bright, Gold, Silver, etc.. 127
Ground, for Etchers ..... 157
Photograph Colors ...... 90
." Transparentinzing ....... 195
Liquids for Water Colors ....... 100
Lithographers' Designs, See Spec.
Catalogue of Works on Art.
Lithographers' Crayons ......... 144
on Request.
Diamonds. Quoted
Lithographers Materials ........ 160 Needles .......... 160 Pens .............. 160 Scrapers .......... 158 Varnish
Lithographs, Colored. See Studies.
Locke Levels. See Engr. Cat.
Logavithmic Paper .............. 185
Curves
Lumber Crayons 279
310
Lustres for China Painting ...... 125

\section*{M}

Magnifying Glasses
319-320
Magnetic Pocket Compasses . . . . 321
Sight Compasses. See
Eng. Catalogue.
Magnetic Dip Compasses. See Engr. Catalogue.
Mah1 Sticks
Manikins and Lay Figures...... 54
Map Measures . ................... 265
Marking Crayons

\section*{". Pins, Surveyors'. \\ See}

Engr. Catalogue.
Marine Studies. See Studies.
Mastic Varnish .................. 37
Mathematical Instruments, Single
and in Cases ....................196-224
Measuring Chains. See Engr. Catalogue.
Measuring Sticks ............... 264
Mediums for China Painting .... 127 ." Oil-Color Painting. . 36-38
., Sphinx .................... 26
Meglip Water-Color .................................... \(\begin{array}{r}100 \\ 24\end{array}\)

Merritt, The, Beam Scale Page
Metallics ...................
241
Metallics
Metallic Tapes. See Engr. Cat.
Water Colors
100
Metal Triangles ................. 277
Tubes, Filing .............. 179
" T-squares ....................158, 271
* Straight Edges ............ 266
" R. R. Curves ..............283, 284
Military Compasses. See Engr.
Catalogue.
Mining Rods. See Engr. Cat.
Mixing Preparations . ............ 36
Modeling Materials ................150-155
. Clay, Dry ............. 150
." Plastilina ............... 150
. Easel ................... 155
. Outfits .................. 150
" Stand ................... 155
. Table ................... 155
" Tools .................... 152-154
. Tools, Leather . ......... 154
Models, Plaster-Paris ............ 154
Drawing ................ 287
Moist Colors ....................... 82-88
. Color Boxes, Empty ...... 94-96
" .. .. Fitted ....... 88-93
Mounted Drawing Papers ........ 168, 175
Mounting Boards ................ 168
Mounts, Gllt, for Medallions. Quoted on Request.
Mucilage . . . . . . . . . . . . . . . . . . . . 105
Mullers, Glass ................... 99
Murillo Boxes . .................... 91

\section*{N}

Needles. Lithographers' .......... 160
" Compass ............... 335
Nests, Color Saucers . . . . . . . . . . 96
Nigrivorine Rubber ............... 315
Nut Oil ........................... 36
0
Oil Cans . ........................... 57
Oil-Color Boxes . . . . . . . . . . . . . . . . 45- 53
.. Brushes ................. 65-81
" Outfits . .................. . 45- 53
" Show Cases . . . . . . . . . 30
Oil Colors, in Tubes .............. 21-30
Oil Colors for French Pen Paint-
ing ...................................
on Colors for Tapestry Painting. 21-30
Oil Painting Materials ........... 5-81
Oils for China Painting . . . . . . . . 127
* " Oil Painting . ........... 36-38

\section*{INDEX (Continued)}


\title{
FWêeren phitadelphia \\ ST. LOUIS
}

\section*{INDEX (Continued)}

Page
Pencil, Pointers . . . . . . . . . . . . . . . 311
Sharpeners ................ 311
Pencils, Hermes 306
Artists' 307
Castell 308
Colored Office . . . . . . . . . 309
Colored .............. 309, 310, 145
Copying ................... 309
for Marking on China.... 128, 310
Hair. See Brushes.
Kohinoor .................. . 307
Eldorado ..................... 308
Venus .............................. 308
Weber-Sussner ............. 145, 309
Conté Crayon ............ 144
Lead . . . . . . . . . . . . . . . . . . 306-310
Lengtheners ............... 308
Paper ...................... 310
School . . . . . . . . . . . . . . . 306-308
Soapstone .................. 310
Stripers and Writers. See
Brushes.
Pens, Cork-Handled .............. 317
Ball-Pointed ............... 318
Blanzy, Poure \& Co. ...... 317
Fountain Fuling.
for Round Writing
Gillott's
Holders
Marking
Shading
Speed Ball
Ruling ......205-208,217, 221-224
Railroad . ................... 208, 217
Border . . . . . . . . . . . ......... 208
" Bow . . . . . . . . . . .200-202, 215-220
Permalba ......................... 28, 101
Perspective Linead .............. 272
Pfleger's Stretcher Pieces ....... 41
Photo-Transparent Colors ....... 90
Photo White ...................... 87
Photo-Engravers' Materials ..... 82-113
Photographs on Ivory, China and Glass

169
Photographic Colors ............. 90
Photographers' Liquid Opaque .... 87
Photo-Retouching Tints ........ 87
White
87
" White
87
Pincers for Stretching . ........ . 42
Pins, Canvas Sketching
40
Planimeters . ...................... 243-249
Plaques, Papier-Maché ...... . . . . 44
Plaster-Paris Models ............ 154
Plastilina ............................. 150
Plate Papers ....................... . . . 159
Plate Oil . ............................. . . . 157
Plotting Scales, Boxwood ....... 253

Page
Plumb Bobs, See Engr. Cat. .. Bob Sheaths. See Eng. Catalogue.
Plumb Bob Fuller. See Engr. Catalogue.
Plumb Bob Line. See Engr. Cat. " " " Adjuster. See
Engr. Catalogue.
Pocket Oil Color Box . . . . . . . . . . 47
. Palette Knife ............. . . 55
" Brushes ..................... 107
* Rules .......................260-262
." Tapes . . . . . . . . . . . . . . . . . . 336
Poles, Ranging. See Engr, Cat.
Poonah Brushes . .................. 81
Poppy Oil . ...................... . . . . 36
Porcelain Colors . . . . . . . . . . . . .124-125
Porcelain Cups ...................... 128
Porte Crayons or Crayon Holders. 149
Portfolios ........................... 173
Poster Show Card Boards ....... 168
Pounce for Tracing Cloth . . . . . . 179
Powders, Bronze ................... 101
Press, Etching . .................. . . . 156
Preservative Prep. . . . . . . . . . . . . . 37
Prints on Blue-Print Paper, etc.. 193
Print Frames and Baths ........194-195
Printers' Varnish ................ . . 157
Printing Ink for Etchers . . . . . . . 157
Protractors . ......................... . 225-230
Protractor Scales .................254-255
Pumps, Air-Brush. Quoted on Request.
Push Pins . . . . . . . . . . . . . . . . . . 305
Pushless Hangers .................. 305
Pyrography, or Wood Burning.
Apparatus and Materials. See
Special Catalogue.

R
Raffael Bristle Brushes, O. C. ... 72
Railroad Curves . . . . . . . . . . . . . . . 282-284
Pens ........................208,217
Raffael Oil-Color Box . ........... . . 45
Ranging Poles. See Engr. Cat.
Feading Glasses . . . . . . . . . . . . . . . . \(\$ 20\)
Red Sable Brushes for Oil-Color Painting

65-67
Red Sable Brushes for Water-
Color Painting . . . . . . . . . . . . . 106-123
Red Sable Brushes for China Painting135

Reducing Glasses
 320

Reflecting Hand Levels. See Engr. Catalogue.
Relief Paste for China ......... 127

\title{
F.WEBERCO \\ \\ \(P \quad H \quad I \quad A \quad D \quad E \quad L \quad P \quad H \quad I \quad A\) \\ \\ \(P \quad H \quad I \quad A \quad D \quad E \quad L \quad P \quad H \quad I \quad A\) ST. LOUIS ST. LOUIS \\ \\ BALTIMORE
} \\ \\ BALTIMORE
}

\section*{INDEX (Continued)}
Page
Relief Pencil Outfit ..... 341
White for China ..... 127
Rembrandt Easels ..... 61
Boxes, W. C ..... 91
Repair Outfits, Tape, See EngrCatalogue.
Reproduction White ..... 87
Rest or Mahl Sticks ..... 58
Restorer for Blue-Prints ..... 192
Retail Color Cases ..... 30, 84
Retouching Tints, Photo. ..... 87
Varnishes ..... 37
Reynold's Bristol Board ..... 167
Riefler's Drawing Instruments.....196-208Casesin
209-214Cases
Riefler's Drawing Instruments, Sep- parate Parts ..... 335
Rockers ..... 158
Rod Level. See Engr. Cat.Rods, Leveling. See Engr. Cat.Rollers, Rubber, Etchers156
Rolling Parallel Rules ..... 268
Roman Gold for China ..... 126-127
Ross' Hand-stipple Papers ..... 170
Rotameters, Map Measures ..... 265
Roulettes ..... 158
Roof Pitches ..... 277
Round-Writing Pens ..... 318
Royal Paste ..... 104
Rubber Bulbs, Fresco ..... 341
. Erasers ..... 312-315
. Kneaded ..... 312
" Loupes ..... 319
. Rollers ..... 156
Sponge ..... 315
*Stur149
Tips315
Rules, Folding Pocket ..... 260-262
Measuring Sticks ..... 264
Combination Pocket
Combination Pocket
235-242
- Slide
260-262
260-262
Engineers' Pocket
Engineers' Pocket ..... 267-268
Rule, Parallel Rule Attachment. ..... 267
Wooden Straight Edges ..... 266
- School ..... 263
. Shrinkag ..... 263
- Steel ..... 262
. Adjustable Curve ..... 280
Fuling Pens . .......205-208, 217, 221-224
Rug Tacks (Designers' Tacks) ..... 305
Russell's Artists' Canvas Boards ..... 44
Russian Sable Brushes for Oil... 67- 68
". a .. .. Water. ..... 108
\begin{tabular}{|c|c|c|}
\hline \multicolumn{3}{|c|}{S} \\
\hline \multirow[b]{3}{*}{Sable} & & Page \\
\hline & Brushes for Oil Colors & \\
\hline & Water Colo & 106-123 \\
\hline \multicolumn{2}{|l|}{Salamander ........} & 37 \\
\hline \multicolumn{2}{|l|}{} & 127 \\
\hline \multicolumn{2}{|l|}{Sand, for Scouring Gold
Sand-Paper Pads ......} & 311 \\
\hline \multicolumn{2}{|l|}{} & 144 \\
\hline \multicolumn{2}{|l|}{Sauce Crayon} & 99 \\
\hline \multicolumn{2}{|l|}{Scale Cases, Jap} & 257 \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{". Guard}} & 257 \\
\hline & & 259-260 \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Scales, Vest-Pocket}} & 253 \\
\hline & Special & 254 \\
\hline  & Bristol Board & 254 \\
\hline \multicolumn{3}{|l|}{" Flat Boxwood and White} \\
\hline \multicolumn{3}{|l|}{Edge ................. . . . . . . 250-254} \\
\hline Scales. & , Metal & \\
\hline \multirow[t]{2}{*}{} & Metric & 252-258 \\
\hline & Plotting & \\
\hline \multirow[t]{2}{*}{} & Protractor & 254, 255 \\
\hline & Triangular & 256-258 \\
\hline & Transp. Flexible & 255 \\
\hline School & 1 Chalk & \\
\hline \multirow[t]{2}{*}{} & Rules & \\
\hline & Drawing Paper & 165 \\
\hline & Drawing Instruments & 220-224 \\
\hline \multirow[t]{2}{*}{} & Water Colors & 88-90 \\
\hline & Water-Color Boxes & \\
\hline \multicolumn{2}{|l|}{Scientific Publications .} & 333-334 \\
\hline \multirow[t]{2}{*}{Scraper} & ers for China Painting & \\
\hline & Engravers & 158 \\
\hline & Oil Painting & \\
\hline \multicolumn{2}{|l|}{Scratch Boards} & \\
\hline \multirow[t]{2}{*}{Section} & n Liners . . . . . . & 273-275 \\
\hline & Papers and Books & 180-189 \\
\hline \multicolumn{2}{|l|}{Sectional Filing Cabinets} & 300-302 \\
\hline \multicolumn{2}{|l|}{Sexton's Omnimetre} & \\
\hline \multicolumn{2}{|l|}{Shading Pens} & \\
\hline \multicolumn{2}{|l|}{Shagreen Paper} & \\
\hline \multicolumn{2}{|l|}{Ship Curves ..} & 285, 286 \\
\hline \multicolumn{2}{|l|}{\multirow[t]{2}{*}{Show-Card Board ". Brushes}} & \\
\hline & & 114-121 \\
\hline \multicolumn{2}{|r|}{" Colors} & \\
\hline \multicolumn{3}{|l|}{Show Case for Moist Colors ..... 30, 84} \\
\hline \multicolumn{3}{|l|}{. Cases for Oil Colors ...... 30, 84} \\
\hline \multicolumn{2}{|l|}{Shrinkage Rules .......} & \\
\hline \multicolumn{3}{|l|}{Siccatives ......................... . 36-38} \\
\hline \multicolumn{3}{|l|}{Sight Poles. See Engr. Cat. " Compasses. See Engr.} \\
\hline Silver & for China Painting & 127 \\
\hline \multirow[t]{2}{*}{*} & Ink & 100 \\
\hline & Leaf & 160 \\
\hline \multirow[t]{2}{*}{} & Paint & 100-101 \\
\hline & Papers & 169 \\
\hline & Shells, Cakes and Cups & 99 \\
\hline \multicolumn{2}{|l|}{Sketch Blocks for Charcoal} & 17 \\
\hline
\end{tabular}
Sable Brushes for Oil Colors .... ..... 65
Salamander ..... 37
and, for Scouring Gold ..... 127
Sauce Crayon44Scale Cases, Japanned Tin9
. Sets
est-Pocket Flat ..... 
5Bristol Board
Edge54
Metrio58
Protractor ..... 4,255255
Chalk263
Drawno Paper220-224
Water Colors ..... 
scientific Publications56
Engravers56
Section273-275
Sectional Filing Cabinets36
Shading Pens ..... 818
Ship Curves ..... 28Show Case for Moist Colors ..... 30, 84Pastels30, 84
inkage Rules
6-38Sight Poles. See Engr. CatSilver for China Painting127" Leaf160
Sketch Blocks for Charcoal ..... 172

\section*{INDEX (Continued)}

Sketch Blocks for Oil Colors ... 43, 43ge " Water Colors and Drawing ..................171-172
Sketch Boards for Water Colors. . 168 Oil Colors ... 43, 44 .. Books ..................... 173
* Boxes for Oil Colors ...... 45, 53 Water Colors... 91-96
Sketching Canvas ................ 39
Easels ................ 62, 63
Paper for Oil Colors... 43
Pins . . . . . . . . . . . . . . . . 40
Stools . . . . . . . . . . . . . . . 63
Umbrellas .............. 64
Umbrella Staffs ....... 64
Slabs, Glass
" Ink ......................... . 97
99

Slants. Color . . . . . . . . . . . . . . . . . 96- 97
Slate Ink Saucer . ................. . 97
Slide Rule, Description ........... 235
Slide Rules
". \({ }^{*}\) Sphinx .............. 236-239 235-242

Chemic ............. 239
Cursors ............ 242
Dwarf .............. 239
Electric ............. 239
Halden, Calculex ... 240
Maniphase .......... 237
Precision ........... 238
Sexton Omnimeter . . 336
Merritt-Wager ....... 241
Smocks
Soapstone Pencils
54
Soapstone Pencils .................. 310
Soennecken's Pens for RoundWriting
Soehnee Varnish ................. 38
Spatulas, Steel ..................... . 55, 56
Specifications, Building .......... 189
Sphinx Buff Drawing Paper.....166-176 Drawing Instruments ....215-219

Sepa-
rate Parts . . . . . . . . . . . . . . . . . 335
Sphinx Gold Paint . . ............... 100-101
" Medium .................... 26
. China Paint Palette ..... 129
" Roman Gold and Bronzes.. 126
". Show Card Colors ...... 86
Spiral Curve ...................... 279
Splice for Tapes. See Engr, Cat.
Splines
281
Spline Weights .................... 281
Sponge Rubber . . . . . . . . . . . . . . . . 315
Spring Clips ....................... 195
Stake Tacks. See Engr, Cat.
Staffs. Umbrella
Stadia Rods. See Engr. Cat.

Steel Erasers . ................... \(\begin{array}{r}\text { Page } \\ 56\end{array}\)
" Chains. See Engr. Cat.
". Erasing Pin .............. 56
^ Palette Knives ............... 55
". Painting Knives . . . . . . . . . . 55
" Pens ............................317-318
" Plates ....................... . 159
. Range Poles. See Engr. Cat.
" Rules ...................... . 262
" Scrapers . ................... 56
" Spatulas ..................... 56
Straight Edges ............... 266
Tapes, Pocket . . . . . . . . . . . . 336
Tape Reparing Outfits. See
Engr. Cat,
Steel Triangles ................... . 277
T-squares . . . . . . . . . . . . . . . . 158, 271
Steinbach III. Board ............ 168
Steinbach Paper .................. 174
Stencils for Fresco Painters .... 161
Stencil Colors ....................161, 340
Knives . . . . . . . . . . . . . . . . 161
Paper, Oiled ............. 161
Stilts . . . . . . . . . . . . . . . . . . . . . . . . 128
Stools, Sketching ................. 63
Draughtman's ............ 299
Covers .................... 299
Stopping-Out Varnish ........... 157
Straight Edges, Wood and Steel.. 266
Strathmore Drawing Boards .... 167
Stretchers, Hand-made, Square,
Oval and Round ..........
Stretchers, Canvas on ........... 40
Pieces . . . . . . . . . . . . 41
Stretchin's Pincers . . . . . . . . . . . . . 42
Stripers and Writers ….........118-121
Students' Water Colors .......... 88
" Oll Color Box ......... 49
Studies for Water-Color, Oil-

> Color, China and Pastel Paint-
ing
332
Studies for Drawing .............. 332
Studio Easels +.................... 60, 61
Stumps . ........................... 147, 149
Stylus, Agate .................... 128
Surveyors' Instruments. See Engineers' Catalogue.
Surveyors' Carrying Bags. See
Engineers' Catalogue.
Swan Quill Pencils, Camel's Hair.. 111
Swedish Ruling Pens ..........206, 217

\section*{T}

Tables, Drawing
291-298
" Modeling
155
Tack Lifter

\section*{INDEX (Continued)}
Tacks, Thumb .....................303-304Stake. See Engr. Cat.
Tally Register ..... 265
Tapers. Wax ..... 157
Tape Splices. See Engr. Cat
" Repair Outfits. See EngCatalogue.Tapes, Steel. See Engr. Cat." Metallic. See Engr. Cat.
" Engineers Pattern See336
Engr, Cat
Tapes, Lufkin Steel. See EngrCat,
Tapes, Surveyors' Chain. SeeEngr Cat.
Tapes, Tension Handles. ..... See
Engr. Cat
Tapestry Painting Brushes ..... 75, 81
. Canva ..... 161, 340
Colors ..... 340
Painting Materials ....161 34
Targets, Level Rod. See EngrCat.Tempera Colors .................. 85-86Tension Handles, See Engr. Cat.Thread Counters .................. 320
Thumb Boxes, "Sphinx" ..... 46
Tacks ..... 303-304
Tiles, White Glazed ..... 128
Timber Scale, Wager ..... 241
Tin Boxes, Japanned, for Moist
Colors ..... 94-96
Tin Boxes, Japanned, for Oil
Colons ..... 47-53
Tin Brush Tray ..... 58
". . Case ..... 58
Cleaners ..... 58
." Cans for Oil90
- Cups for Water Color ..... 90
" Foil ..... 341
" Palette Cups for Oil ..... 57
Palette for Water Color ..... 90
Water Bottles, Japanneđ ..... 95,96
Tinting Saucers, China ..... 99
Tips, Gilders ..... 123
\(70-71\)
Tools for Carving Wood ..... 339
" " Modeling ..... 151-154
Tortillons ..... 147
Tourist Oil-Color Box ..... 48
Tracers, Agate ..... 128
Tracing Cloth ..... 178
" Cloth Colors ..... 179
" Papers ..... 177-178
" . Points ..... 157
Profile ..... 180-181
Page
Transfer Paper
Transfer Paper " ..... 169
Graphite ..... 128,169
Transit and Levels, See Engineers'
Catalogue.
Transit Books ..... 187
Transparant Photo-Colors ..... 90
Transparentizing Liquid ..... 37, 195
Trays, Hardwood, for Ink Bottles. ..... 103
Bath, for Blue-Prints ..... 195
Trestles, Adjustable ..... 290
Triangles, Celluloid ..... 276
Lettering ..... 277
Roof Pitches ..... 277
Wooden ..... 276
German-silver ..... 277
Triangular Scales ..... 6-258
Trowels, Artists' ..... 55
T-Square Holder, Weed's ..... 271
T-Squares, All Kinds ..... 158, 269, 271
Tubes, Tin, Empty. Quoted on
Request,
Tubes, for Preserving Drawings ..... 179
Turpentine ..... 36
U
Umbrellas, Sketching ..... 64
Umbrella Staffs ..... 64
Universal Drawing Boards ..... 289
V
Varnishes for Oll Painting ..... 36- 38
Water-Color Painting. ..... 37-38
Varnish, Stopping-out ..... 157
Varnish Brushes ..... 79-80
for Plate Printing ..... 157
Vellum, Genuine ..... 169
Vibert's Preparations ..... 38
Vises, Hand ..... 157
W
Water Bottles, Japanned Tin .... 95-96
Water-Color Boards ..... 168
" Brushes ..... 106-123
" Liquids nd Med'ms.. \(100-101\)" Painting Materials. . 82-123
.. Studies ... 332
Water-Colors in Boxes .........91-93, 338
Water-Color Sketch Boards ..... 168
* Varnish ..... - 38
. Palettes ..... 96-99
* Liquids ............... 100-101
" F. W. Co.'s Artists' ..... 82-84
" School ..... 88-93
signers' ..... 82-86

\section*{INDEX (Continued)}
Page84
Water-Colors, F. W. Co.'s Studio..Card86
Water-Colors, F. W. Co.'s Tech-nical ..........................Water-Colors, F. W. Co.'s Photog-\(82-84\)
raphic
Taphic90
Water-ColRetouch87
Water-Color, Tempera ..... \(-86\)
" Reproduction White. ..... 87
" Permalba ..... 28
. Opaque ..... 87
. Students ..... 87
Water Colors, W. \& N. Artists.Quoted on Request.Water Glasses98
Waterpro ..... 103-105
Water Cups, School ..... 90
Wax Crayons ..... 309,310
" for Modeling ..... 150
" Modeling Tools ..... 153
" for Walling ..... 157
" Tapers for Etching ..... 157
Weights for Splines ..... 281
Whatman's Ill. Board ..... 168
Papers ..... 165
Wheels for Lining China ..... 130
White Ink
PageWire-End Modeling Tools100,103
153
W. \& N. Colors. Quoted on Re-quest.
W. \& N. Brushes ..... 113
Illustrators' Boards.
Quoted on Request.
Wooden Blocks, Geometrical ..... 287
" Sketch Boxes for Oil Col.. ..... 45,48
" Manikin ..... 54
" Dividers ..... 272
* Mahl Sticks ..... 58
." Palettes ..... 59
Wood Carving ..... 339
W orks, Architectural, Carvers',Lithographers', Engravers' andFresco Painters', etc. See Spe-cial Catalogue.
Works on Art, for Architects,Fresco Painters, Decorators,Sculptors, Lithographers, MetalWorkers and Designers of AllBranches. Write for SpecialCatalogue,

\section*{Z}
Zinc Plates ..... 159
Zinc White, Oil-Color ..... 26```


[^0]:    'Have been selected for their dependable permanency and stability, perfectly safe and durable when properly employed, alone or in admixture with each other.
    *Are of quite sufficient permanency and stability for general commercial use.
    **O no practical permanence or stability and should be avoided where even reasonable permanency is desired.

[^1]:    *Chinese Blue
    **Chinese Orange See Alizarin Lakes.

[^2]:    * Chinese Blue Synonymous with Prussian Blue (which see).
    **Chinese Orange See Alizarin Lakes.

[^3]:    **Violet Carmine See Alizarin Lakes,
    **Violet Crap Lake See Alizarin Lakes.
    *Viridian Synonymous with Oxide of Chromium, Transparent.
    **Warm Sepia Sepia with admixture of Burnt Sienna, to yield a warm hue of good permanence.

[^4]:    **Zinnober Greens Synonymous with Chrome Greens, the different hues being obtained by varying the amounts of the ingredients. Like the Chrome Greens, owing to content of lead, discoloration occurs in presence of Sulphurous gases or compounds. Unsafe in admixture with organic pigments and lake colors. Where permanency is essential the permanent Oxide of Chromium Greens should be given preference.

[^5]:    Size
    No
    No
    16.

    Each Per Doz

    $$
    \begin{aligned}
    & \text { Size } \\
    & \text { No. } \\
    & 18 \ldots \\
    & 20 . .
    \end{aligned}
    $$

[^6]:    Water Color and Pastel Cabinet, with 3 Drawers ..................Each, Oil Color Case, with 70 Spaces (See Illustration, page 30) ........ Each, Color Card of 90 Original Washes, 50 Cents Each

[^7]:    Each Per Doz.
    No.
    Each Per Doz.

[^8]:    No.
    With 30 assorted Pastels, small size sticks
    44 assorted Pastels, small size sticks
    ,
    . 56 assorted Pastels, including Carmine, small size sticks
    " 66 assorted Pastels, including Carmine, full size sticks

    $$
    \text { " } 130 \text { assorted Pastels, including Carmine, full size sticks }
    $$

    Double bottom, 164 assorted Pastels, including Carmine, full size sticks
    Double bottom, 300 assorted Soft Pastels, including Carmine, full size sticks

[^9]:    Lemercier's, Nos. 1, 2, 3
    Per Doz. Per Gross
    Vanhymbeck's, Nos. 1, 2, 3
    Currier's, Nos. 1, 2, 3
    Korn's, Nos. 00, $0,1,2,3,4$
    Korn's Lithographic Crayon Pencils, Nos. 1, 2, 3, 4.. Each, Per Doz.

[^10]:    No.
    Grey or White Thin Paper Stumps, 3 inches long
    5 "i Thin Paper Stumps, 5 inches long ........................

[^11]:    Containing Assortments of Prepared Modeling Clay for the Youthful Modeler
    Small Size
    

[^12]:    No.
    $3114-\mathrm{S}$ Size, $11 \times 15$
    3114-L " $22 \times 30$

[^13]:    No.
    3870-R Barlock Case, containing:

    3808-R $5 \frac{1}{2}$-inch Pen and Pencil Compass with lengthening bar, fixed needle-point leg and extra divider leg;
    3861-R 5-inch Spring-blade Ruling Pen;
    Box of leads and key
    3871-R Barlock Case, containing:
    Same assortment as Set No. 3870-R, with addition of No. 3804-R 51-inch Plain Divider

    3872-R Barlock Case, containing (see cut at top):
    3808-R 51-inch Pen and Pencil Compass with lengthening bar, fixed needle-point leg and extra divider leg;
    $3831-\mathrm{R}$ 3 $\frac{1}{2}$-inch Steel-spring Bow Pen;
    3861-R 5-inch Spring-blade Ruling Pen;
    Box of leads and key

[^14]:    No.
    4001 Plain Divider, 5 inches, Round Points, with Handle
    Each
    4005 Compass, 5 inches, with fixed Needle Point, Pen and Pencil parts,
    4010 Ruling Pen, 5 inches, Black Lacquered Metal Handle
    "GLOBE" IMPROVED SCHOOL COMPASS
    Illustration $1 / 2$ Size
    No.
    4080
    Compass, $4 \frac{1}{t}$ inches. Circular Spring and Center Whee Adjustment, Replaceable Steel Point, 1 Changeable Steel Point, Pen and Pencil parts and Metal Handle. Box with Leads.

    In Paper Box
    Pen and Pencil Points can be inserted into the Metal Handle and used as ordinary drawing pen or pencil, respectively.

    > A Perfect Compass for Use in Elementary Schools

